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(54) Method and apparatus for removing noise data from a digitized image.

(57) An apparatus and method for removing background noise and high frequency noise from an image by comparing each pixel in the image with neighboring pixels defining a variably shaped and

sized kernel. The size and shape of the kernel are optimized for the particular characteristics of the data to be analyzed.

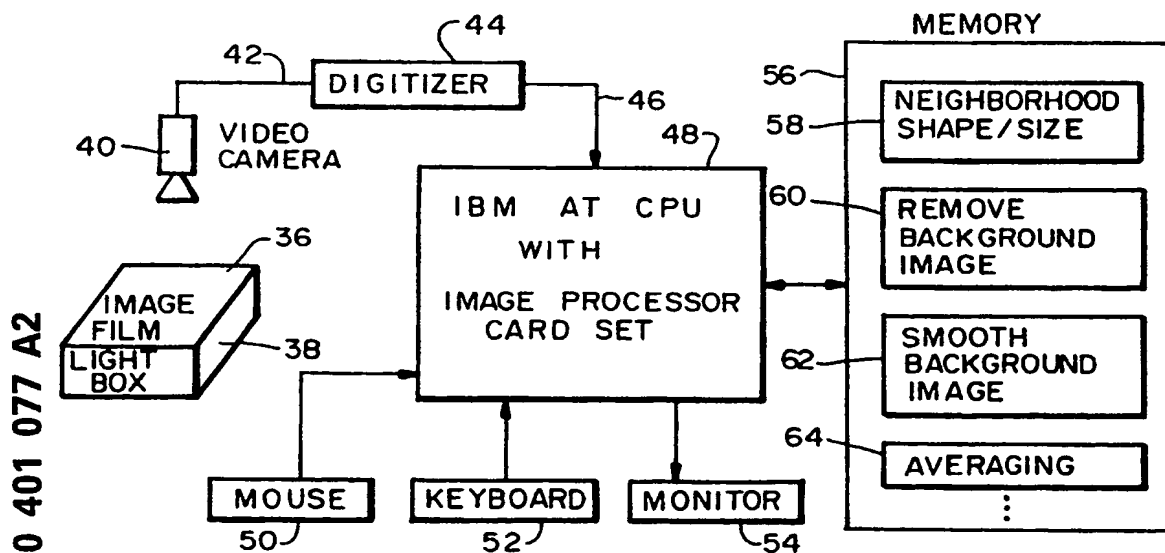


FIG. 3

## METHOD AND APPARATUS FOR GENERATING QUANTIFIABLE VIDEO DISPLAYS

### Background of the Invention

The invention pertains generally to the field of image processing, and, more particularly, to the field of generating quantifiable images from digital images representing data spatially as pixel patterns of greater and lesser intensity.

The preferred embodiment of the invention is adapted for analysis of biological data generated in recombinant DNA research and other biological research. Such data includes 2D gels, DNA sequencing gels, gel blots, RFLP, DNA blots, microtiter color, microtiter fluorescence and other types of data presented spatially in an image. Typically, such images consist of a plurality of pixels with areas of pixels of varying intensity representing some amount of a particular DNA or protein with the intensity attributable to the protein being superimposed upon intensity representing background noise and high frequency noise caused by such things as pinholes in the film, penetration of the film by gamma rays etc.

Although the invention will be described in terms of its application to biological data, it will be appreciated that the teachings of the invention have utility in other fields of analysis of images.

A problem in analyzing such data in the past so as to be able to quantify the amount of a protein represented by a particular area of pixels in the image has been how to separate the intensity representing the data from the intensity caused by background noise. Although pixel intensity is the concept used herein to convey the teachings of the invention, pixel value is the general concept contemplated by the teachings of the invention. That is, the pixel values being analyzed may represent something other than light intensity. For example, each pixel in an image may represent the strength of radio transmissions from a small sector of the sky such that the invention could be used in radio astronomy applications.

In the past, such techniques as rolling ball filters have been used for background noise removal from images. Such a teaching is found in a conference paper by Rutherford et al. entitled "Object Identification and Measurement from Images with Access to the Database to Select Specific Subpopulations of Special Interest" published at the E-O Lase and E-O Imaging Conference sponsored by S.P.I.E., January 1987 with the proceedings published in May of 1987. There, the authors describe a method of background correction, i.e., noise removal, by use of a rolling ball filter which effectively takes the minimum pixel value in the ball filter region as the pixel value for

the background image. The resultant image is then subtracted from the digitized image. A pipeline image array processor is used to perform this process. Such a technique however is not optimized for removal of background noise and high frequency noise in all situations because it does not take into account the varying geometric shapes of the data of interest in many varied application and because it does not take into account other application specific phenomenon such as vertical noise strips, dead spaces etc.

Accordingly, a need has arisen for apparatus and a method to optimize the noise removal process for data presented in many varied spatial formats.

### Summary of the Invention

According to the teachings of the invention, there is disclosed herein a method and apparatus for background noise removal which uses a variable shape and a variable size kernel or neighborhood of adjacent pixels surrounding or next to the pixel being processed. The value of the pixel being processed is compared to all, or some selected subset, of the pixels in the neighborhood to find the minimum value. This minimum value is then substituted for the value of the pixel being processed. When all pixels have been so processed by comparing them to the values of the surrounding pixels in the corresponding neighborhood (each pixel has its own neighborhood), the resulting image is a "background image". A background image is an image where each pixel has the value of the smallest valued pixel in the neighborhood to which it was compared. Of course, those skilled in the art will appreciate that the background removal process can also be performed on a reverse video image by finding the maximum pixel value in each neighborhood and substituting that value for the value of the pixel of interest corresponding to that neighborhood.

The background image may then be further processed in some embodiments to remove high frequency noise. In one embodiment, high frequency noise is removed by processing the background image to generate a "maximum image", i.e., an image generated from the background image showing the maximum pixel values for each neighborhood in the background image. This maximum image is generated by using a smaller neighborhood than used in generating the background image and then using this smaller neighborhood to process the background image as follows. Each

pixel has its value compared to the values of the pixels in a corresponding neighborhood of surrounding pixels. The maximum value in each neighborhood is then substituted for the value of the corresponding pixel. When this has been done for all pixels, the maximum image is complete. This maximum image is substantially devoid of high frequency, large amplitude noise which dips below the surrounding neighborhood such as is characteristic of pinhole defects in film etc. This maximum image is subtracted from the starting image to generate a "background removed image".

In another embodiment according to the teachings of the invention, the maximum image is used as a starting image in an apparatus to perform a process to remove high frequency, low amplitude noise. In this process, a neighborhood is used which is smaller than the neighborhood used to generate the background image. Each pixel value for a pixel of interest is added to the pixel values for all the other pixels in the corresponding neighborhood. The sum is then divided by the number of pixels in the neighborhood to derive an average pixel value, and the value of the pixel of interest is set equal to this average value. After this is done for all pixels, the resultant image is subtracted from the original image used to generate the background image to arrive at a background removed image.

In another alternative embodiment, the average image may be generated directly from the background image and the resulting image subtracted from the original image to derive the background removed image.

In another alternative embodiment, the image generated by the averaging process may be generated directly from the background image, and the resulting image is used as the input image for the process of generating the "maximum" image. The resulting image is subtracted from the original image to derive the background removed image.

#### Brief Description of the Drawings

Figures 1(a) and 1(b) show, respectively, a typical autoradiograph of a 1-D gel separation and the same image with the data removed leaving only the background intensity showing.

Figure 2 is a drawing showing how the data bearing image pixel value profile compared to the background pixel value profile.

Figure 3 is a block diagram of the hardware which can be used according to the teachings of the invention.

Figure 4 is a flow chart for the process for removing background noise from the image.

Figures 5 through 7 illustrate the process of

background noise removal by comparison to neighborhood pixel values.

Figure 8 is a more detailed flow chart of the background noise removal process.

Figures 9 and 10 are alternative processes for selection of kernel size and shape.

Figures 11 and 12 illustrate how different kernel shapes are optimized for various data applications.

Figure 13 is a flow chart for the preferred embodiment of the process of background noise removal.

Figure 14 is a more detailed flow chart illustrating the process of generating a maximum image.

Figure 15 is a more detailed flowchart illustrating the process of high-frequency, low-amplitude noise removal by averaging.

Figure 16 is a flow chart for the process of generating a percent change image.

Figures 17(a) through 17(e) are the components of a quad display and the quad display itself.

Figure 18 is another type of quad display.

Figure 19 illustrates the concept of linked cursors for the quad display.

Figure 20 illustrates the process for alignment of images 1 and 2 which must be performed prior to the computation of values for the cursor locations in the quad display.

#### Detailed Description of the Preferred Embodiment

Referring to Figure 1(a), there is shown an image of a typical autoradiograph of a 1-D protein separation. Each of lanes 10 and 24 contains separated bands of radioactively labeled proteins from different samples. For example, lane 10 contains bands 12 and 14 with the difference in pitch of the crosshatching of band 14 indicating that this band is of greater brightness or intensity than the intensity of band 12. Likewise, bands 16, 18, 20 and 22 in Figure 1(a) all have varying degrees of brightness or intensity. A similar situation exists for lane 24, which is separated from lane 10 by a dead space 26. The varying intensity of each band is indicative of the amount of the particular protein or proteins represented by that band which was present on the gel at that particular position.

It is useful to be able to quantify an image such as shown in Figure 1(a) such that the intensity of the various bands can be measured as an indication of the amount of protein represented thereby. The difficulty with this approach, however, is that the various bands have their intensities superimposed upon background noise which, because of its varying intensity across a lane, causes errors. That is, the background noise can be thought of as forming an image of varying intensity which would

still be present even if there were no data represented in Figure 1(a). Figure 1(b) is a drawing showing this background image. The background image has a lane 10' which corresponds to lane 10 in Figure 1(a) and a lane 24' which corresponds to the lane 24 in Figure 1(a). The differences in pitch in the crosshatching of lanes 10' and 24' conveys in pictorial form the variation in the intensity or brightness of the background noise in the lane at various locations. For example, the area 28 in lane 10' has a brighter background intensity than the area 30. By superimposing the image of Figure 1-(a) on the image of Figure 1(b), it can be seen that the relatively brighter intensity of band 14, which overlies an area of lesser intensity in the background image, as compared to a less-bright band 18, which overlies an area of brighter background intensity in Figure 1(b). For this reason, the relative intensities of the bands 14 and 18 cannot be used directly to quantify the amount of protein at those respective positions in the gel without creating errors caused by the varying intensity of the background image along lane 10'. Thus, according to the teachings of the invention, the background image of Figure 1(b) is derived by image processing of the image represented by Figure 1(a), and the resulting image is then subtracted from the image of Figure 1(a) to leave a quantifiable data image.

Referring to Figure 2, there are shown comparative intensity profiles through the image of Figure 1(a) to show the effect of background removal. The intensity trace labeled 32 represents the intensity of the original image which includes both intensity attributable to data as well as intensity attributable to background noise. The trace labeled 34 represent the intensity of the original image after background removal and, therefore, represents the intensity attributable to the quantity of a particular protein located at the corresponding location on the gel.

According to the teachings of the invention, a manually manipulated cursor having a variable size and a variable shape may be placed over any band of interest in the background-removed image to determine the intensity of that band attributable to the presence of a protein of interest. The process of determining the intensity caused by the data essentially involves the process of integrating the trace 34 to determine the area under any particular peak. Typically, the result of this integration will be reported at the touch of a key on a computer keyboard.

Referring to Figure 3, there is shown a block diagram of a computer apparatus according to the teachings of the invention. Image film 36, which contains a spatial depiction of the data to be analyzed, is placed on a light box 38. The light box shines light through the image film to create a

pattern of light which has varying spatial intensity in accordance with the data and the background noise. Also, the image may be acquired by shining light on a nontranslucent film such as a polaroid shot. The resulting light pattern contains the data to be analyzed. This light pattern is converted by a video camera 40 into a video signal on line 42 representing an analog form of a raster-scanned version of the image on film 36. This analog signal is digitized in a data converter interface 44 and results in a stream of digital data on bus 46. This stream of digital data is read by a computer 48 and is stored in memory for further image-processing operations. The computer 48 is typically an IBM AT/XT personal computer with an image processor card set plugged into the card slots. The image processor card set is an off-the-shelf, image-processing circuit manufactured by Matrox under the trademark MVP-AT/XT Image-Processing Card Set. The computer 48 interfaces with the user through a mouse 50, a keyboard 52 and a monitor 54. An external memory 56 stores data and programs. Several software modules according to the teachings of the invention are shown as stored in memory 56. They are: a neighborhood shape/size interfacing module 58; a background removal module 60; a smoothing module 62; and an averaging module 64. The neighborhood shape/size interface module 58 serves to determine the shape and size of a neighborhood or kernel of pixels the values of which will be compared to the value of a pixel of interest in the kernel to determine the spatial intensity patterns of the background image. Typically, the shape of the neighborhood is determined by the computer for the particular application involved and relates to the typical shape of the data patterns to be analyzed. However, in alternative embodiments, the shape of the neighborhood may be set by the user in any of several different ways. For example, at start-up time, or upon switching applications, the computer can prompt the user through monitor 54 to determine what type of data is to be analyzed. After the user responds, either through the keyboard 52 or the mouse 50, the computer can put up either a textual, verbal or a pictorial menu of neighborhood shapes to be used. The user can then indicate which shape to use either by selecting it with mouse 50 or by typing in the code for the shape via keyboard 52 or by stating the shape. Alternatively, the user may sketch the neighborhood shape and/or size to be used through use of the mouse 50. In some embodiments, the shape of the neighborhood will be selected by the computer 48 based upon the user response regarding what type of data is to be analyzed. In some embodiments, a first neighborhood shape will be used to get rid of particular noise patterns having specific shapes followed by

the use of another shape for the neighborhood which is keyed to the shape of the particular data or application for which the teachings of the invention will be used.

The size of the neighborhood to be used generally depends upon the typical size of the data spatial patterns to be analyzed. In the preferred embodiment, the size of the neighborhood is chosen which has a largest dimension which is two and one-half times the size of the largest data spatial pattern to be analyzed. In the preferred embodiment, the user may be prompted for the desired size for the neighborhood and may respond either in terms of a number or a code for the desired size. Alternatively, the selected shape for the kernel may be displayed on the screen, and the user may adjust the size of the kernel by having the kernel superimposed upon the image to be analyzed and using a "rubber band"-type cursor to adjust the size of the kernel. The details as to how the shape and size of the kernel to be used are selected by the user or by the computer are not critical to the invention.

The details of the remove background image module 60 will be described in greater detail below. The basic function of this module is to determine the level of background intensity throughout the image to be analyzed and to create a background image reflecting that background intensity at all points in the background image. This background image may then be subtracted from the original image in some embodiments to derive a background removed image.

The smooth background image module 62 removes high-frequency, high-amplitude noise (high-amplitude noise for purposes of this invention means noise which dips below the level the surrounding neighborhood) by finding the maximum pixel in each kernel of the background image and setting the value of the pixel of interest in this kernel to the maximum value found in the kernel. When this is done for all pixels and their corresponding kernels "maximum" background image has been completed. This serves to get rid of high frequency, large amplitude noise characterized by pixels of low intensity in the background image such as might be caused by pinholes in the film, gamma rays, etc.

Finally, the averaging module 64 gets rid of high frequency, small amplitude noise in either the background image or the smoothed background image generated by module 62. This is done by averaging all the pixels in a neighborhood and setting the pixel of interest in each neighborhood to the average value. Both modules 62 and 64 will be described in more detail below.

Referring to Figure 4, there is shown a flow chart for a basic embodiment of a process accord-

ing to the teachings of the invention for background removal. The first step, symbolized by block 66, is to acquire the image to be analyzed. Specifically, the image to be analyzed is digitized into a plurality of pixels. These pixels define an image which contains data to be analyzed and displays this data in terms of varying spatial patterns of intensity, color, fill pattern or other means of displaying values for the pixels. How the value for each pixel is depicted is not critical to the invention. Typically, pixel values will be displayed in terms of their intensities. For some applications, the data to be analyzed is shown as dark spots on a lighter background such as autoradiography. In those applications, a "negative" or reverse video image is generated from the acquired image before further processing. In other applications, the data to be analyzed is shown as lighter spots on a dark background. In such applications, the acquired image is used as is without doing a reverse video image. In some embodiments, it is useful to average the original acquired image before further processing to remove the background. This averaging process is identical to the process described below with reference to Figure 15 carried out on the background removed image or the image generated by the process described with reference to Figure 14.

Next, the computer system interacts with the user to select a particular kernel size and/or shape for use in generating the background image, as symbolized by block 68. As noted earlier, the kernel shape is typically selected by the computer based upon the type of data to be analyzed in the preferred embodiment. That is, if the data takes the form of vertical rectangular blocks, as in the case of one-dimensional separations of DNA or proteins, then the preferred kernel shape is usually rectangular. However, if the data to be analyzed takes the form of circular spots such as in DNA library screens, cells tagged with fluorescing antibodies, or images of 96-well microtiter plates, then the preferred kernel shape is circular.

Generally speaking, the size of the kernel should be substantially larger than the size of the largest data area to be analyzed. That is, if the largest data spot to be analyzed is a circle of 2 mm diameter, then the preferred kernel shape and size is a circular area having a diameter sufficient to cause the total area within the kernel to be approximately 2.5 times the radius of the 2 mm diameter data spot. The reason for this size relationship is to insure that at least some background area outside the area of data of interest are included within the kernel. This is necessary to insure that a proper background image is generated. This is because the process of generating the background image involves comparing the value of each pixel in the image to be analyzed to the values of the sur-

rounding pixels to find a minimum value characteristic of the background. Thus, if no background pixels are included within a kernel which happens to be centered over a data spot, then the minimum intensity value which will be found in that kernel will not in fact be representative of background intensity at that location but will be representative of the intensity of the data as superimposed upon the intensity of the background.

As noted earlier herein, the kernel size may be selected by the user using any one of a number of different methods, none of which are critical to the teachings of the invention. Alternatively, the kernel size may be selected by the computer automatically, based on the type of data being analyzed. In the preferred embodiment, the kernel shape is selected by the computer automatically, based upon the data being analyzed, and the kernel size is selected by the user using a "rubber band" cursor to adjust the size of a default kernel which is superimposed over the image of data to be analyzed. The user then touches an edge of the kernel and "drags" it out to an appropriate dimension in some embodiments. In the case of rectangular kernels, the user may touch each of two opposing sides and drag each one individually out to the appropriate dimension so as to obtain the desired size and aspect ratio. This is done after dragging the kernel to a desired position on the image to be analyzed so as to surround the largest area of data shown on the image.

Block 70 represents the process of actually generating the background image using the kernel selected by the user. This process is best understood by reference to Figure 5, which shows a typical kernel or neighborhood 72 of rectangular shape surrounding a pixel of interest 74. Figure 6 shows the relationship of the kernel 72 to the overall image being processed. The pixel of interest 74 is any pixel within the area encompassed by the kernel 72. Although typically the pixel of interest is in the center of the kernel in the preferred embodiment, in alternative embodiments the pixel of interest 74 may be located anywhere within the boundaries of the kernel 72. The pixel of interest 74 is shown in the middle of a raster scan line 76 and is in the middle of a column of pixels 78. As is best seen in Figure 6, the pixel of interest 74 is a single pixel in a line of pixels which together comprise the single raster scan line 76 of the image to be analyzed 80. The image 80 is comprised of 512 raster scan lines like the raster scan line 76 in some embodiments, and there are typically 512 pixels on each raster scan line. The size of the raster is not critical to the invention. The kernel 72 includes several pixels from the raster scan line 76 within its boundaries and includes several other raster scan lines both above and below the raster

scan line 76 although these other raster scan lines are not shown in Figure 6 to avoid unnecessary complexity.

Referring again to Figure 5, the process of generating the background image is accomplished by comparing the value of the pixel 74 to the values of each of the other pixels in the kernel 72 and finding the minimum value pixel and substituting its value for the current value of the pixel 74. For example, assume that the pixel 74 has a value of 5 on a scale from 1 to 10. Assume also that the pixels 82, 84 and 86 in the raster scan line 88 have values of 7, 4 and 1, respectively. When the value of the pixel 74 is compared to the value of the pixel 82, the value of the pixel 74 will be less, and no substitution is made. When the value of the pixel 74 is compared to the value of the pixel 84, it will be found that the value of the pixel 84 is less than that of pixel 74, and a substitution will be made such that the value of pixel 74 is rewritten to be a 4. When pixel 74 is compared to pixel 86, it will be found that pixel 86 has a still smaller value of 1, and this value of 1 will be written to pixel 74.

This process continues until all the other pixels in the kernel 72 have been examined. Each time a new minimum is found, that value is used to update the value of the pixel 74. When this comparison process is completed for every pixel in the kernel 72, the final value of the pixel 74 will be established for use as one pixel in the background image. This process of comparing each pixel in the image 80 of Figure 6 to all the pixels in a kernel comprised of a plurality of pixels adjacent to the pixel of interest is repeated for every pixel in the 512 by 512 pixel array of the image 80. When it has been completed, the complete background image has been generated.

The process symbolized by block 70 contemplates simultaneous processing for each pixel in the image 80 such that each pixel in the image is compared simultaneously with one other pixel in a kernel of pixels adjacent to the pixel of interest, and this process is repeated simultaneously for all pixels until all the pixels of interest have been compared to all the pixels and their respective kernels. This substantially increases the speed of processing to generate the background image. In some alternative embodiments, only a selected subset of the other pixels in each kernel will be sampled. In still other alternative embodiments, the process of comparing each pixel with the adjacent pixels in its kernel may be done serially such that each pixel of interest is compared simultaneously with all or some subset of all the pixels in the corresponding kernel such that the entire kernel is searched in a single machine cycle or however many machine cycles are necessary to make the comparison between one pixel and another. After

this process is accomplished, another pixel of interest from the image to be analyzed is selected and simultaneous comparison is made of this pixel with all or some subset of the pixels in the kernel corresponding to that pixel.

Note that as the pixel of interest moves along a raster line, a corresponding kernel surrounding that pixel of interest is selected to keep the pixel of interest in the same relative location within the boundaries of the kernel.

Note also that the background image generation process must be performed using a copy of the image such that the updating of the values of each pixel of interest occurs in the copy. This is necessary because each pixel of interest is a neighboring pixel for the kernel corresponding to some other pixel of interest. Therefore, if the value of the pixel of interest in the image to be analyzed is updated prior to having processed all the other pixels in the image, there will be distortions and errors caused in the processing of other pixels whose kernels overlap the pixel which had its value changed.

After the background image is generated, it is subtracted on a pixel-by-pixel basis from the image to be analyzed, as symbolized by block 90 in Figure 4. That is, the value of pixel 1 in raster scan line 1 of the background image is subtracted from the value of pixel 1 in raster scan line 1 of the image to be analyzed.

After this process is completed, the resultant image is displayed as a background-removed image on the monitor 54 in Figure 3, as symbolized by block 92 in Figure 4.

Referring to Figure 7, there is shown symbolically the process by which whole image processing occurs in the computer apparatus according to the teachings of the invention. Simultaneous comparisons of each pixel in the image to be analyzed 80 to a single one of the adjacent pixels in the corresponding kernel is accomplished by the use of offset and compare commands to the image processing board set in the IBM ATTM. For example, assume that the image to be analyzed 80 is comprised of 9 pixels labeled A through I. Assume also that the heavy line 94 defines the boundaries of a kernel for a pixel of interest E. The phrase "pixel of interest" as the phrase is used herein means the pixel being processed which has its value compared to the other pixel values in the kernel or neighborhood and which has its value replaced if the test of the comparison is satisfied, i.e., in the case of generation of the background image, if the neighboring pixel selected from the other pixels in the kernel has a value which is less than the value of the pixel of interest.

To further the illustration, assume also that the heavy line 96 defines the boundaries for a kernel

for the pixel I. Similarly, a kernel comprised of the pixels D, E, G and H can be defined for the pixel H, and a kernel comprised of the pixels B, C, E and F can be defined for the pixel F.

Now assume that the first comparison in the process of generating the background image is to compare the values of the pixels of interest in all these kernels, i.e., the pixels at the lower right-hand corner of each kernel, to the values of the pixels at the upper left-hand corner of each kernel. Thus, in the case of kernel 94, the value of pixel E, the pixel of interest, is compared to the value of the pixel A. If the value of A is less than the value of E, then the value of A will be substituted for the value of E in a copy of the image 80. This copy is shown to the right and is labeled the "offset" image. Simultaneously, the value of pixel I is compared to the value of the pixel E. If the value of E is less than the value of I, then the value of I will be overwritten with the value of E in the offset image.

The offset image 98 is originally a copy of the image to be analyzed 80. To facilitate simultaneous comparison of some or all of the pixels in image 80 to one of the pixels in their corresponding kernels, the offset image 98 is used as follows. Imagine the offset image 98 is a transparency which can be placed over the image 80 and shifted about so as to align any pixel with any other pixel. For the first comparison in the hypothetical example, the pixel E will be compared with the pixel A. To implement this, the memory map of digital data representing the "transparency", i.e., the offset image 98, is electronically placed over the memory map of digital data representing the original or "acquired" image 80 such that the offset image pixel A' lies on top of the pixel E and the offset image pixel B' lies on top of the pixel F in image 80. This aligns the offset image with the image 80 such that each pixel in the image 80 which has a pixel in the offset image 98 overlying it will be aligned with the pixel to which it is to be compared for the first round of comparisons. That is, the pixel E will be aligned with the pixel A' and the pixel F will be aligned with the pixel B'. Likewise, the pixel H will be aligned with the pixel D' and the pixel I will be aligned with the pixel E'. Examination of the kernels of image 80 indicates that for each of the overlapped pixels in image 80, i.e., the pixels of interest, the overlying pixel will be the pixel in the upper left-hand corner of the kernel in image 80 which corresponds to each pixel in image 80 which is overlapped. The offset for this first round of comparisons, then is "1 pixel up, 1 pixel left".

The value of each pixel in image 80 which is overlapped is then compared to the value of the pixel which overlaps it in image 98. If any of the pixel values in image 98 are less than the pixel values in pixel 80 which they overlie, the minimum

value is used to update the pixel in the offset image corresponding to the pixel in the image 80. The pixels in the offset image 98 which correspond to the pixels in the image 80 are those with the same "relative address". To aid in understanding the meaning of the phrase "relative address" one can think of the labels A, B, etc. for the pixels in image 80 as their relative addresses or labels in memory. Thus, if the value of the pixel A' is less than the value of the pixel E, then the value of the pixel A' is written into the memory location storing the value of the pixel E'. The same process occurs for all other overlapped pixels.

Pixels in image 80 which are not overlapped, such as the pixels A, B, C, D and G, are compared to "dummy" pixels (constants or locations in the memory map which are loaded with constants) in the offset image 98 which have had their values artificially set to the maximum intensity level. This has the effect of causing the non-overlapped pixels in image 80 to never have their corresponding pixels in image 98 replaced with a minimum. The dummy pixels are labeled with Xs in image 98.

Thus, after one round of comparisons, each pixel in the image 80 will have been compared to one of the pixels in the corresponding kernel or a dummy pixel. To complete the process of generating the background image, a new offset or shift is performed to align the offset image with the image 80 such that the next pixel to be examined in each kernel overlies the pixel of interest in each kernel. Thus, for example, if the pixel E is to be compared next with the pixel D, then the offset image 98 is shifted such that the pixel D' overlaps the pixel E, and the pixel E' overlaps the pixel F. Then a new round of comparisons is made simultaneously to compare all overlapped pixels with the values of their overlapping pixels with appropriate updating where new minimums are found.

This offset/compare/update process occurs as many times as there are pixels in each kernel to be compared with the pixel of interest in each kernel. It is not necessary that all neighboring pixels in every kernel be compared with the pixel of interest to generate the background image. In fact, in some embodiments, only a sampling of the other pixels in each kernel is used to generate the background image.

The above-described process is graphically illustrated in the flow chart of Figure 8. The process illustrated in Figure 8 corresponds to the process symbolized by block 70 in Figure 4. No further discussion of Figure 8 is deemed necessary since it is self explanatory in light of the discussion above. Of course, those skilled in the art will appreciate that the background removal process can also be performed on a reverse video image by finding the maximum pixel value in each neighborhood

and substituting that value for the value of the pixel of interest corresponding to that neighborhood. This technique is deemed sufficiently self-explanatory as to not warrant further discussion.

Referring to Figure 9, there is shown a flow chart for the preferred embodiment of the process symbolized by block 68 in Figure 4. Basically, the process represented by the flow chart of Figure 9 represents an embodiment where the computer prompts the user to indicate what type of data is being analyzed and then selects the appropriate kernel shape based upon the user response. The user is then prompted to select an appropriate size for the kernel given the shape selected by the computer.

Referring to Figure 10, there is shown an alternative embodiment of the process symbolized by block 68 in Figure 4. The difference between the embodiment shown in Figure 9 and Figure 10 is that in the embodiment of Figure 9, the computer selects the kernel shape based upon the user-supplied data regarding the type of application data that is to be analyzed. In Figure 9, the user then selects the kernel size. In the embodiment of Figure 10, once the user supplies data regarding what type of application the machine is to be used on, the user is then prompted to select the kernel shape as well as to select the kernel size. In yet another alternative embodiment, the computer may select both the shape and the size based on the application data supplied by the user.

Figure 11 shows an example of two different kernel shapes for use on band type data such as is found in one-dimensional gel protein separations. The kernel shape indicated by the dashed line labeled 100 is not a good shape to use in this situation since it overlaps a portion of the dead space 102 which lies between band 104 and band 106. Since there is no valid background noise in the dead space 102, the kernel shape 100 will distort the background image, thereby creating errors. The kernel shape 108 is a better shape to use for this situation since it includes areas of the band 104 outside the data band of interest 110 but does not include any pixels in the dead space 102.

Figure 12 illustrates a situation where differing kernel shapes are useful. The more or less circular data spots in Figure 12 would be best quantized by the use of a circular kernel such as that shown in dashed lines at 112. However, certain types of data include vertical strips of noise in the image such as is shown at 114. In these situations, it is useful to do a two-stage background image generation process. The first stage of this process is to use a slender vertical kernel which is thinner than the thinnest noise streaks in the image. Such a kernel is shown at 116 in dashed lines. This kernel shape can effectively remove noise strips such as shown

at 114. After a background image is generated using the kernel shape of 116, the second stage of the background image generation process is entered where the kernel shape changes to that shown at 112. Background image generation then proceeds operating upon the image generated using the kernel 112 on the acquired image.

Referring to Figure 13, there is shown a flowchart for the preferred embodiment of a process according to the teachings of the invention. The first three stages in the process are symbolized by blocks 66, 68 and 70. These three stages are identical with the first three stages in the process symbolized by the block diagram of Figure 4. Likewise, the last two stages, symbolized by blocks 90 and 92 are identical to the process stages symbolized by blocks 90 and 92 in Figure 4. The difference between the process symbolized by Figure 4 and the process symbolized by Figure 13 lies in processed stages symbolized by blocks 120 and 122.

The process represented by block 120 is a series of steps to remove high frequency, large amplitude noise from the background image generated by the process represented by block 70. Such high frequency, large amplitude noise typically results from pinholes in the film, the penetration of gamma rays through the film or other such phenomena which cause large spikes in the intensity values of pixels. The details of this process will be given with reference to Figure 14.

Referring to Figure 14, there is shown a flowchart symbolizing the process steps implemented by block 120 in Figure 13. The process represented by Figure 14 essentially generates a maximum image from the background image generated by block 70 in Figure 13. This is done using a smaller kernel than was used to generate the background image and by searching throughout the kernel to find the maximum pixel value and using that value to update the value of the pixel of interest within that kernel. This process is repeated for all or some subset of all of the pixels in the image to generate a maximum image.

The first step in generating a maximum image is symbolized by block 124 representing the process of making a copy of the background image generated in the process represented by block 70 in Figure 13.

Next, a kernel is selected as symbolized by block 126. This kernel should be smaller than the kernel used to generate the background image and, generally, is very small in that it has an area which corresponds to the area of pinhole type defects.

Next, in block 128 the copy image is offset to align any selected pixel in each kernel with the corresponding pixel of interest in the background

image. This process is identical to the process described with reference to FIGS. 6, 7 and 8 except that a much smaller kernel is used.

Block 130 represents the process of comparing each pair of aligned pixels to determine which one has the maximum value. This process is also identical to the process used in generating the background image, but the neighboring pixel in the kernel is checked to determine if its value is greater than the value of the pixel of interest rather than less than as in the case of generating the background image.

Block 132 represents the process of updating the pixel in the copy image corresponding to the pixel of interest in the background image for each aligned pixel pair where the aligned pixel in the copy image has a value which is greater than the aligned pixel of interest in the background image. This process also corresponds to the background image generation process described with reference to FIGS. 6, 7 and 8 and need not be further described here.

Next, in block 134, the copy image is offset to a different location to align another pixel in each kernel with the pixel of interest in the corresponding kernel in the background image.

Then the test of block 136 is performed to determine if all the other pixels in the kernel selected for generation of the maximum image from the background image have been checked against the pixel of interest in each kernel. If all the neighboring pixels each kernel have been checked, the test of block 136 causes branching to block 138 where exit to the next step in the process is performed based upon completion of the maximum image. The next step in the process would be block 122 in Figure 13 in the preferred embodiment. However, in alternative embodiments, the next step in the process would be block 90 in Figure 13 or some other image processing step. If the test of block 136 indicates that not all the pixels in the kernel have been checked for a value which exceeds the value of the pixel of interest, then a branch to block 130 is performed where each pair of aligned pixels in all the kernels are checked as previously described. Steps 130, 132, 134 and 136 are performed as many times as there are neighboring pixels to the pixel of interest in each kernel. These steps 130, 132 and 134 along with step 136 result in the simultaneous processing of the entire image.

Referring to Figure 15, there is shown a flowchart of the process represented by block 122 in Figure 13. This process smooths the background image by averaging all of the pixels in a kernel thereby removing high frequency, low amplitude noise. The process of Figure 15 can be carried out using the background image generated by the pro-

cess of block 70 as the starting image in some embodiments or upon the image generated by the process represented by block 120 in Figure 13 as the starting image. That is, alternative embodiments to the process symbolized by the flowchart at Figure 13 are to perform either the process represented by block 120 alone or the process represented by block 122 alone or both between the processes represented by blocks 70 and 90. Accordingly, the first stage in the process represented by Figure 15 is symbolized by block 140 and making a copy of the starting image where the starting image may be the image generated by the process represented by block 70 in Figure 13 or the image generated by the process represented by block 120.

Next, in block 142 a kernel is selected. In some embodiments, the computer may automatically select this kernel, and in other embodiments, the user may select a kernel. In either embodiment, the size and/or shape may be variable. The size of the kernel is generally substantially smaller than the kernel used to generate the background image as selected in block 68 of Figure 13.

Block 144 represents the process of offsetting the copy image from the starting image to align one of the pixels in each kernel having the shape and size selected in block 142 with the corresponding pixel of interest in each kernel. This process is similar to the process represented by block 128 in Figure 14 and the process discussed with reference to FIGS. 5-8.

Next, in block 146 the pair of aligned pixels are summed with the sum being used to update the pixels in the copy image which are aligned with pixels in the starting image. In some embodiments, pixels which have no overlying pixel in the copy image are summed with a constant.

In block 148 a process is carried out to offset the summed image generated by the process of block 146 to align another pixel from each kernel with the corresponding pixel of interest in each kernel.

The test of block 150 is to determine if all other pixels in each kernel have been aligned with and summed with the pixel of interest in each kernel with the total being used to update the value of the pixel and the summed image which corresponds to the pixel of interest in each kernel. In other words, steps 144, 146 and 148 are performed a number of times equal to the number of pixels in a kernel less one. This means that every other pixel in the kernel is aligned with the pixel of interest and summed therewith. If the test of block 150 determines that not all pixels in each kernel have been summed with the pixel of interest, branching back to the process represented by block 146 occurs. If all other pixels in a kernel have been summed, the

process of block 152 is performed. In this process, each pixel in the summed image has its value divided by the number of pixels in each kernel. This generates a value for each pixel in the summed image which is the average value for all pixels and the kernel. This average value is then used to update the value of the pixel in the summed image.

The resultant image is used by block 90 in Figure 13 as the background image which is subtracted from the acquired image to leave a background removed image which is displayed by the process of block 92 in Figure 13.

Block 154 represents the process of repeating the smoothing or averaging process if desired or necessary. If not desired or not necessary, exit to block 90 in Figure 13 is performed.

Referring to Figure 16, there is shown a flow chart for a process of generating a percent change image useful in comparing two data images. Preferably, this process is carried out on a background removed image, but it may also be carried out between any two images. The process starts as symbolized in block 170 by subtracting the value of a pixel in image 1 from the value of a corresponding pixel in image 2. Typically, this process would be carried by subtracting pixel 1 of line 1 of image 1 from pixel 1 of line 1 of image 2 and storing the difference. However, the order in which the pixel are process is immaterial as long as corresponding pixels, i.e., pixels having the same relative location in the image are subtracted. An additional feature in some embodiments including the preferred embodiment is to clip the noise from the percent change image by implementing a rule limiting the allowable differences. The rule is, if the sum of the values of the two pixels being compared is less than a noise clipping constant (fixed for any application but modifiable by the user), then the difference is set to 0. This rule has the effect of eliminating salt and pepper noise from the percent change image which can result when the differences between the images at substantially all the pixels is small.

Next, in step 172, the difference value is multiplied by a constant. This constant may, in some embodiments be fixed for all comparisons, but, in the preferred embodiment, the constant is selected by the computer based upon the application, but the user can override the selection and supply a new constant.

Step 174 represents the process of dividing the difference between the two pixel values by the minimum of the pixel values compared. This step generates a percentage change number indicating how much the intensity or value of the one of the pixels varies from the value of the other pixel. These percentage numbers vary from 255% to 1%

because the maximum pixel intensity value is 255 and the minimum pixel intensity value is 1.

The significance of the constant is that it controls what percentages changes can be seen in the final percent change image and the intensities at which the percent change pixels are displayed. That is, the constant controls the range of percentage differences which can be seen by stepping up the percentage change numbers to larger numbers. However, the maximum intensity value which can be displayed is 255. Therefore, selection of larger constants can lead to clipping since the resulting percentage change numbers after multiplication can exceed 255. In the preferred embodiment, the constant ranges from +1 to +256, but in other embodiments, any number between 0 and any positive number could be used including fractional numbers.

In step 176, the result from step 174 is added to another constant to set the 0% change number equal to some reference intensity value. In the preferred embodiment, intensity values range from 1 to 255, and the constant used in step 176 is 127 such that the 0% change falls in the middle of the gray scale.

In step 178, the results from step 176 are clipped between 0 and 255 for purposes of using the results on a video display. The result is stored in a percent change image file or framestore.

Step 180 represents the process of repeating steps 170 through 178 for all pixels in both images to complete generation of the percent change image. The image may then be displayed for inspection and analysis.

Referring to Figures 17(a) through 17(b), there are shown a plurality of images which together comprise the components of a quad display and the quad display itself. The purpose of a quad display is to facilitate visual comparisons and analysis of data bearing images. The components of a quad display are the two compared images used to generate the percent change image, the percent change image itself, and a fourth image which is called the difference image. This difference image is at each pixel the difference between the two corresponding pixels in images 1 and 2, divided by 2 and added to 127. The percent change image is the image generated by the process of Figure 16. The term "corresponding pixels" for the description of the difference image means the same thing as that term as used for the percent change image.

If the display hardware is large enough to display four complete images of the size of image 1, then all four images are simultaneously displayed as arranged in Figure 17(e). If however, the display apparatus can display only one image having the number of pixels in image 1, then several alternative embodiments are possible. First, each image

may be sampled to develop of subset of pixel for that image. Such sampling can include selecting every other pixel on every other line such that one-fourth of the total number of pixels remain to be displayed. In another alternative embodiment, a selection of one-quarter of each image is made, and that quarter of an image is displayed in the corresponding portion of the quad display of Figure 17(e). The quarter of each image selected can be selected by the user or by the computer based upon the application or can be set to a default selection by the computer and modifiable by the user. The possibilities for which one-quarter to select are numerous and include one quadrant of each image, a horizontal strip amounting to one-fourth of the pixels or a vertical strip amounting to one-fourth of the pixels.

In the preferred embodiment, selects which quarter of each image to be displayed by manipulation of a "linked" cursor in a scout image. The scout image is, in the referred embodiment, a 2 to 1 minification or subset of image 2. This minification is performed by selecting every other pixel of every other line and displaying the result as the scout image in the lower left quadrant of the display. The locked cursor is a fixed cursor encompassing one-fourth of the total area of the scout image. The user manipulates the position of this cursor by manipulation of a mouse, track ball or light pen etc. Also, the position of the cursor can be positioned by default in one of the four quadrants of the scout image and this position can then be modified by the user. As the user moves the cursor in the scout image, a corresponding cursor in each of the other four images moves synchronously to encompass the pixels corresponding to the pixels encompassed by the cursor in the scout image. When the user, selects a position for the cursor in the scout image as the final position, the corresponding pixels in the other three images are selected and displayed in the corresponding quadrants of the quad display shown in Figure 17(e). Simultaneously, all the pixels in the difference image corresponding to the selected pixels in images 1, 2 and the percent change image are selected and displayed in the lower left quadrant of the quad display.

In other embodiments, the quad display may be arranged differently. An example of such an alternative arrangement is as shown in Figure 18. Any combination of hardware and software to implement this process and cursor manipulation will suffice for purposes of practicing the invention. The preferred embodiment of computer code which when combined with the hardware illustrated in Figure 3 will implement the teachings of the invention is given in Appendix A.

Referring again to Figure 17(e) there is shown

the positions for four measurement cursor locations covering four sets of corresponding pixels. These cursor locations are shown at 182, 184, 186 and 188 in exemplary rectangular shape. The shape and size of the cursors can be selected by default by the computer and be modifiable by the user or can be selected outright by the user.

After the position, shape and size of the cursor is established, the computer calculates some quantity related to the values of the pixels inside the cursor. Examples of what these quantities can be are: 1) absorption meaning the sum of all the pixel values within the cursor in preselected units, which can be optical density, counts per minute, etc. for images 1 and 2 only; 2) the average value of all pixels in each cursor location for images 1 and 2; 3) square millimeters of optical density meaning absorption in optical density units divided by the number of pixels per square millimeter. Once these values are calculated for images 1 and 2, the values for the corresponding sets of pixels in the cursor locations in the percent change and difference images are automatically determined. That is, for the percent change image, the value returned for the cursor location is calculated according to the algorithm specified in Figure 16 as modified by omission of multiplication by the constant and addition of the second constant. That is, the number returned for the cursor location in the percent change image is the value determined for the cursor in image 1 minus the value for the cursor in image 2 divided by the minimum value between these two numbers.

Likewise, the value returned for the cursor in the difference image is the value of the difference between the values returned for the cursor locations in images 1 and 2 divided by 2.

Figure 19 clarifies how the cursor manipulated by the user in the 2 to 1 minified scout image (subset of image 2) corresponds to one-quarter of the pixels in the full size image 2 at the same relative location in the image.

Referring to Figure 20, there is shown a diagram illustrating the process of alignment of images 1 and 2 which is necessary for the computation of values for the pixels in the cursors in the quad display. Figure 20(a) represents the camera input video data that defines image 2. Figure 20(b) illustrates an already acquired image 1 stored in a frame buffer. The corresponding pixels from these two images are combined according to the algorithm specified in Figure 20(d) to generate the image of Figure 20(c) on the display. The user then manipulates image 2 under the camera until the displayed image calculated per the equation of Figure 20(d) shows minimal difference between image 1 and image 2. When this condition exists, the user so indicates, and the pixels of the image

of Figure 20(a) are captured in a frame buffer as the final image 2 for use in the processing described above to return the values for the selected cursor locations in the quad display shown in Figure 17.

Although the invention has been described in terms of the preferred and alternative embodiments disclosed herein, those skilled in the art will appreciate numerous modifications which can be made without departing from the spirit and scope of the invention. All such modifications are intended to be included within the scope of the claims appended hereto.

## Claims

1. An apparatus for removing background noise from an image, comprising:  
means for digitizing an image into a plurality of pixels defining a first image, each pixel having a value, and for making and storing a copy of said first image as a copy image;  
means for generating a background image from said copy image by simultaneous processing on each said pixel, said simultaneous processing comprising, for each selected pixel in said copy image, comparing the value of said selected pixel with the value of another pixel in a group of pixels adjacent to said selected pixels and replacing the value at said selected pixel with the value of said other pixel if said other pixel's value is less than the value of said selected pixel, and repeating said comparison and replacement process for at least selected ones of said other pixels in said group; and  
means for subtracting said background image from said first image to generate a background-removed image.

2. The apparatus of claim 1 further comprising means for displaying said background-removed image.

3. The apparatus of claim 1 wherein said means for generating includes means for selecting said other pixels in said group so that said other pixels define a predetermined shape.

4. The apparatus of claim 3 wherein said means for selecting includes means for selecting said other pixels so as to define a group with a predetermined shape.

5. The apparatus of claim 1 wherein said means for digitizing creates a digital image that displays data in spatial patterns having predetermined size and shape characteristics, and wherein said means for generating includes means for selecting said other pixels in said group includes means to select said other pixels so as to define a group having predetermined size and shape characteristics relative to said size and shape char-

acteristics of said data.

6. The apparatus of claim 5 wherein said means for selecting selects said other pixels so as to define said group with a shape which substantially matches the shape of a selected data shape.

7. The apparatus of claim 6 wherein said means for selecting includes means for selecting a variable size for said group such that said group size can be substantially matched to the size of a selected area of data.

8. An apparatus for removing background noise from a digital image which displays data spatially as a plurality of pixels in a raster display, each pixel having a value, comprising:

means for digitizing an image containing said data and background noise to generate a first image;

means for removing said background noise by repeated simultaneous processing of selected groups of pixel pairs between a copy of said first image hereafter called a copy image and said first image to generate a background image from said copy image; and

means for subtracting said background image from said first image.

9. The apparatus of claim 1 wherein said selected group of pixels includes a kernel of pixels in said copy image which define a shape and size in said copy image which have predetermined relationships to the shape and size of selected data in said first image.

10. The apparatus of claim 8 wherein said means for removing includes means to select said pixels in said kernel to define a predetermined shape relative to the shape of data to be analyzed in said first image and further comprising means to select a variable sized group of said pixels in said kernel so as to maintain said predetermined shape but sized according to an input signal.

11. The apparatus of claim 8 wherein said means for removing includes means to select said pixels in said kernel so as to have a shape which matches the typical shape of data to be analyzed in said first image and so as to have a size which is larger than the largest sized group of data pixels to be analyzed.

12. The apparatus of claim 9 further comprising means to remove high-frequency, large-amplitude noise from said background image to generate a smoothed image.

13. The apparatus of claim 12 further comprising means for removing high-frequency, low-amplitude noise from said smoothed image to generate a filtered background image.

14. The apparatus of claim 8 further comprising means for removing high-frequency, low-amplitude noise from said background image from said first image.

15. The apparatus of claim 8 further comprising

means for removing high-frequency, large amplitude noise from said background image before subtracting said background image from said first image.

16. An automated noise removal system in a system to graphically display data spatially as areas of varying intensity on a video display to preserve the intensity of data-bearing data displayed in spatial features of greater than a predetermined size while removing background noise also displayed graphically and spatially on a video display comprising:

a uniform illumination light box on which a transparent or translucent medium is placed, said medium having spatially depicted thereon the data to be analyzed;

a video camera positioned adjacent said light box so that there is an optical pathway therebetween, said camera providing a video output comprising an analog video signal depicting said data on said medium in terms of the spatial patterns of light intensity of light from said light box which passes through said medium with said light intensity being modulated by the spatial patterns of data and background noise depicted on said medium;

converter means coupled to receive said analog video signal for converting said analog video signal to a stream of digital data and for storing said digital data in a memory to define a digital first image comprised of a plurality of pixels arranged in rows and columns spatially displaying said data along with background noise;

background removal means coupled to said converter means for simultaneously comparing the intensity value at each pixel in said first image with a corresponding, predetermined intensity value of a pixel in an offset image, where said offset image is a copy of said first image but offset from said first image by a predetermined number of rows and columns, and at each pixel location in said offset image establishing the intensity value as the intensity value which is smallest as between the pair of compared pixel intensity values which correspond to said pixel location in said offset image and for repeating the offsetting and comparison and writing of intensity values for the offset image for each of a plurality of different offset values defining a neighborhood shape for a predetermined group of pixels in said first image thereby establishing said offset image as a background image where each selected pixel's intensity value corresponds to the minimum intensity value for all pixels in a group of pixels in said first image which are adjacent to the pixel which corresponds to said selected pixel when there is a zero row-and-column offset, said group of pixels defining a shape having the shape of said neighborhood;

means for subtracting said background image from

said first image on a pixel-by-pixel basis to generate a background-removed image; and means for converting said background-removed image to a video signal and for displaying said video signal on a video display.

17. An operator-interactive automated noise background removal system to preserve the amplitude of data-bearing spatial features greater than a prescribed size while removing background and high-frequency noise from an image of biological data acquired from an autoradiograph, electrophoresis gel, fluorescence gel, photographic film or other media, said system comprising:  
 a means for displaying an image containing data shown by spatial patterns of varying intensity;  
 image conversion means for generating video output data from said image and positioned adjacent said means for displaying said image so that there is an optical pathway therebetween, said image conversion means for converting said image to video output data at a video output;  
 background detector means connected via an analog-to-digital converter pathway for receiving video output data and converting said video data to digital data, said background detector means processing said digital data so as to detect valid background values within the image of data;  
 computer means connected to said background detector means and having an interactive mode for the operator to specify upper size bounds of valid spatial features, said background detector determining the background neighborhood used in surrounding spatial features of the data;  
 monitor means connected to said background detector means and responsive to said video output for displaying a television image of said background-removed data;

18. The system of claim 17, wherein said background detector system means comprises means for converting said optical image data to digital image data and for causing said optical image data to be, upon receipt of a reverse command, converted to reverse video digital data after said conversion to digital image data.

19. The system of claim 18, wherein said means for converting comprises an analog to digital converter.

20. The system of claim 17, wherein said background detector means comprises first, second and third discriminators for detecting when said received digital data is valid signal comprising spatial features in the biological data.

21. The system of claim 20, wherein said first discriminator means comprises means for generating a background image which is subtracted from said image of biological data.

22. The system of claim 21, wherein said background image comprises digital image data which

consists of a rectangular array of pixels each of whose intensity is the minimum within a neighborhood of each pixel in said biological image data.

23. The system of claim 22, wherein said array of pixels comprises digital data having digital intensity values which are shades of gray when displayed on said monitor means.

24. The system of claim 20, wherein said second discriminator means comprises means for determination of a neighborhood size for use in discriminating out noise which enables measurement of the amplitude of features and objects in said image of biological data where the base plateau beneath the features and objects is nonuniform.

25. The system of claim 22, wherein said third discriminator means comprises means for smoothing of said background image by removing or damping high-frequency, low-amplitude noise in said background image of biological data.

26. The system of claim 22, wherein said fourth discriminator means comprises means for clipping of said background image so as to clip noise which is high frequency as compared with the frequency of the signal for said data-bearing spatial features which is also high amplitude relative to the amplitude of the signal in said image of biological data where data-bearing spatial features are not present.

27. The system of claim 17, wherein said background detector includes means for subtraction of said background image from said image of biological data which preserves data-bearing spatial features and enables measurement of the amplitude of the signal comprising data-bearing spatial features within said image of biological data.

28. The system of claim 24, wherein said second discriminator means further comprises means for selecting neighborhood size through user interaction to separate data-bearing spatial features in said images of biological data so as to pick a neighborhood size and shape suited to enable measurement of quantity of biological materials represented by multiple data-bearing spatial features in close proximity.

29. The system of claim 17, wherein said computer means is connected to said image conversion means for receiving video output data therefrom, said computer means comprising a video interface for converting said video output data to digital signals and storing the digital signals.

30. The system of claim 17, wherein said computer means comprises an interface circuit and a computer connected thereto, said interface circuit converting digital signals received from said computer to analog signals and sending said analog signals to said monitor means, in response to which said monitor means displays said background-removed images of valid spatial fea-

tures.

31. An apparatus for removal of noise from a digital image displaying data spatially as a plurality of pixels on a raster-scanned video display comprising:

a background removal circuit for making a copy of said digital image and comparing a selected pixel in said digital image to a neighborhood of adjacent pixels using said copy and finding the minimum pixel value in said neighborhood and setting a pixel in said copy corresponding to said selected pixel to said minimum pixel value and for doing this process simultaneously for a predetermined number of pixels in said digital image to convert said copy to a background image;

a subtracter for subtracting said background image from said digital image to remove noise from said digital image.

32. The apparatus of claim 31 further comprising a circuit for receiving data regarding the size and shape of said neighborhood best suited for optimal noise removal and for causing said background removal circuit to use such a neighborhood in noise removal.

33. The apparatus of claim 32 further comprising a high-frequency filter in said background removal circuit for removing high-frequency noise from said background image before subtracting said background image from said digital image.

34. A method of removing noise from a data-bearing image spatially displaying data, comprising the steps of:

simultaneously comparing each pixel in said image to a neighborhood of adjacent pixels and setting said each pixel to the minimum value found in said neighborhood to generate a background image; subtracting said background image from said data-bearing image.

35. The method of claim 34 further comprising the step of selecting the size and shape of said neighborhood for optimum removal of noise from said data-bearing image given the size and shape of said spatial displays of data.

36. The method of claim 35 further comprising the step of removing or damping high-frequency noise in said background image before subtracting said background image from said data-bearing image.

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0000000	80	0B	00	09	61	63	71	39-36	67	6F	2E	63	61	88	07	....acq96go.ca..
0000010	00	00	00	4D	53	20	43	6E-88	09	00	00	9F	4C	4C	49	...MS Cn.....LLI
0000020	42	43	45	25	88	06	00	00-9D	32	6C	4F	E8	88	06	00	BCE%.....210....
0000030	00	A1	01	43	56	37	96	4C-00	00	06	44	47	52	4F	55	...CV7.L...DGROU
0000040	50	0C	41	43	51	39	36	47-4F	5F	54	45	58	54	04	43	P.ACQ96GO_TEXT.C
0000050	4F	44	45	05	5F	44	41	54-41	04	44	41	54	41	05	43	ODE._DATA.DATA.C
0000060	4F	4E	53	54	04	5F	42	53-53	03	42	53	53	08	46	41	ONST._BSS.BSS.FA
0000070	52	5F	44	41	54	41	0D	41-43	51	39	36	47	4F	35	5F	R_DATA.ACQ96GO5_
0000080	44	41	54	41	51	98	07	00-48	58	15	03	04	01	A4	98	DATAQ...HX.....
0000090	07	00	48	B6	06	05	06	01-51	98	07	00	48	0E	00	07	..H.....Q...H...
00000A0	07	01	FC	98	07	00	48	F0-00	08	09	01	17	52	07	00	.....H.....
00000B0	58	00	06	0B	0A	01	DD	9A-08	00	02	FF	03	FF	04	FF	h.....
00000C0	02	56	9C	0D	00	00	03	01-02	02	01	03	04	40	01	45	.V.....@.E
00000D0	01	00	8C	19	00	0A	5F	5F-61	63	72	74	75	73	65	64	....._actused
00000E0	00	0A	5F	6D	6F	76	65	5F-67	72	69	64	00	13	B4	14	...move_grid....
00000F0	00	11	61	63	71	5F	61	6E-64	5F	61	6C	69	67	6E	5F	..acq_and_align_
0000100	39	36	77	00	B1	8C	1A	00-05	5F	7A	65	72	6F	00	10	96w....._zero..
0000110	5F	67	65	74	5F	70	72	6F-62	65	31	5F	6E	61	6D	65	_get_probe1_name
0000120	00	DF	84	15	00	12	64	65-66	69	6E	65	5F	65	6C	6C	.....define_ell
0000130	69	70	73	65	5F	39	36	77-00	28	8C	8C	00	04	5F	6F	ipse_96w.(...._o
0000140	6E	65	00	08	5F	73	70	72-69	6E	74	66	00	10	5F	67	ne...sprintf..._g
0000150	65	74	5F	70	72	6F	62	65-32	5F	6E	61	6D	65	00	04	et_probe2_name..
0000160	5F	74	77	6F	00	08	5F	6D-65	6E	75	5F	75	70	00	10	_two.._menu_up..
0000170	5F	67	65	74	5F	70	72	6F-62	65	33	5F	6E	61	6D	65	_get_probe3_name
0000180	00	10	5F	67	65	74	5F	70-72	6F	62	65	34	5F	6E	61	..._get_probe4_na
0000190	6D	65	00	0B	5F	62	6C	69-6E	6B	5F	69	74	65	6D	00	me...blink_item.
00001A0	0F	5F	64	72	61	77	5F	6D-65	6E	75	5F	69	74	65	6D	..draw_menu_item
00001B0	00	0A	5F	6D	65	6E	75	5F-64	6F	77	6E	00	1C	5F	67	..._menu_down..._g
00001C0	65	74	5F	73	74	61	6E	64-61	72	64	5F	67	72	69	64	et_standard_grid
00001D0	5F	73	74	72	75	63	74	75-72	65	00	0A	5F	6D	65	6E	_structure...men
00001E0	75	5F	70	72	6F	63	00	08-5F	61	63	71	39	36	67	6F	u_proc..._acq96go
00001F0	00	05	5F	62	65	6C	6C	00-AE	B4	0C	00	09	78	5F	61	...bell.....x_a
0000200	63	71	39	36	67	6F	00	E6-8C	BF	00	0B	5F	69	6D	5F	cq96go....._im
0000210	70	72	6F	63	77	69	6E	00-08	5F	61	63	74	69	6F	6E	procwin..._action
0000220	73	00	09	5F	69	6D	5F	63-6C	65	61	72	00	06	5F	63	s..._im_clear...c
0000230	6C	5F	77	6E	00	09	5F	63-6C	5F	6F	76	6C	75	74	00	i_wn..._cl_ovlut.
0000240	0B	5F	66	69	6E	64	5F	64-65	6E	39	36	00	07	5F	6C	.._find_den96...l
0000250	6C	5F	61	6C	75	00	09	5F-67	72	61	70	68	69	6E	74	l_alu..._graphint
0000260	00	0A	5F	6C	6C	5F	62	61-73	5F	66	62	00	1C	5F	70	..._ll_bas_fb...p
0000270	75	74	5F	73	74	61	6E	64-61	72	64	5F	67	72	69	64	ut_standard_grid
0000280	5F	73	74	72	75	63	74	75-72	65	00	0C	5F	69	6D	5F	_structure..._im
0000290	67	72	61	70	68	77	69	6E-00	0A	5F	6C	6C	5F	77	69	graphwin..._ll_wi
00002A0	6E	5F	66	62	00	0D	5F	6D-65	73	73	61	67	65	5F	61	n_fb..._message_a
00002B0	72	65	61	00	13	5F	67	65-74	5F	65	78	70	65	72	69	rea..._get_experi
00002C0	6D	65	6E	74	5F	6B	65	79-00	EE	B4	0F	00	0C	64	72	ment_key.....dr
00002D0	61	77	5F	65	6C	6C	69	70-73	65	00	36	8C	46	00	08	aw_ellipse.6.F..

MODULE 1

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APPENDIX A

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0002E0	5F	6C	6C	5F	6D	6F	64	65-00	0A	5F	69	6D	5F	6F	70	_ll_mode.._im_op
0002F0	6D	6F	64	65	00	12	5F	63-6C	65	61	72	5F	61	63	74	mode.._clear_act
000300	69	6F	6E	5F	61	72	65	61-00	07	5F	6C	6C	5F	62	75	ion_area.._ll_bu
000310	73	00	10	5F	63	6C	65	61-72	5F	6D	65	6E	75	5F	61	s.._clear_menu_a
000320	72	65	61	00	13	B4	17	00-14	62	75	69	6C	64	5F	69	rea.....build_i
000330	6D	61	67	65	5F	66	69	6C-65	6E	61	6D	65	00	0F	8C	mage_filename...
000340	A6	00	13	5F	63	6C	65	61-72	5F	6D	65	73	73	61	67	..._clear_messag
000350	65	5F	61	72	65	61	00	0C-5F	69	6D	5F	66	72	6F	6D	e_area.._im_from
000360	64	69	73	6B	00	14	5F	77-72	69	74	65	5F	61	6C	6C	disk.._write_all
000370	5F	73	74	61	6E	64	61	72-64	73	00	0B	5F	66	6C	69	_standards.._fli
000380	63	6B	65	72	00	0D	5F	69-6D	5F	64	69	73	66	6F	72	cker.._im_disfor
000390	6D	61	74	00	0C	5F	6C	6C-5F	74	6B	5F	66	69	65	6C	mat.._ll_tk_fiel
0003A0	64	00	0B	5F	69	6D	5F	6F-75	74	70	61	74	6B	00	07	d.._im_outpath..
0003B0	5F	6D	6F	75	73	65	72	00-0B	5F	69	6D	5F	73	79	6E	_mouser.._im_syn
0003C0	63	00	09	5F	69	6D	5F	76-69	64	65	6F	00	06	5F	6F	c.._im_video.._o
0003D0	76	6C	75	74	00	07	5F	64-65	6E	39	36	77	00	07	5F	vlut.._den96w.._
0003E0	65	72	72	6D	73	67	00	62-B0	16	00	10	5F	61	63	71	errmsg.b...._aco
0003F0	39	36	67	6F	5F	65	6C	6C-69	70	73	65	00	61	0C	01	96go_ellipse.a..
000400	96	8C	DC	00	12	5F	67	65-74	5F	70	69	63	5F	64	69	....._get_pic_di
000410	72	65	63	74	6F	72	79	00-05	5F	65	78	69	74	00	0F	rectory..._exit..
000420	5F	73	65	74	5F	6D	65	6E-75	5F	74	69	74	6C	65	00	_set_menu_title.
000430	06	5F	6B	5F	65	78	70	00-13	5F	67	65	74	5F	63	61	.._k_exp..._get_ca
000440	6D	69	6E	69	74	5F	76	61-6C	75	65	73	00	0C	5F	69	minit_values.._i
000450	6D	5F	73	65	74	63	6F	6C-6F	72	00	15	5F	63	6C	6F	m_setcolor..._clo
000460	73	65	5F	73	74	61	6E	64-61	72	64	73	5F	66	69	6C	se_standards_fil
000470	65	00	0C	5F	69	6D	5F	64-72	61	77	6D	6F	64	65	00	e.._im_drawmode.
000480	07	5F	76	5F	70	6C	73	74-00	0B	5F	69	6D	5F	6D	6F	.._v_plst.._im_mo
000490	76	65	00	13	5F	70	75	74-5F	63	61	6D	69	6E	69	74	ve..._put_camin
0004A0	5F	76	61	6C	75	65	73	00-0E	5F	67	65	74	5F	73	74	_values..._get_st
0004B0	61	6E	64	61	72	64	73	00-0B	5F	69	6D	5F	65	6C	6C	andards.._im_ell
0004C0	69	70	73	65	00	0C	5F	73-65	74	5F	6D	65	73	73	61	ipse..._set_messa
0004D0	67	65	00	0A	5F	69	6D	5F-6F	66	66	73	65	74	00	D4	ge..._im_offset..
0004E0	B0	13	00	0D	5F	61	63	71-39	36	67	6F	5F	67	72	69	....._acq96go_gri
0004F0	64	00	61	0C	01	E4	8C	0E-01	0B	5F	69	6D	5F	67	61	d.a....._im_ga
000500	69	6E	00	0D	5F	53	65	74-43	75	72	73	6F	72	50	6F	in..._SetCursorPo
000510	73	00	11	5F	73	65	74	5F-73	63	72	65	65	6E	5F	74	s..._set_screen_t
000520	69	74	6C	65	00	0B	5F	77-72	69	74	65	5F	67	72	69	itle..._write_gri
000530	64	00	0C	5F	69	6D	5F	73-6F	66	74	69	6E	69	74	00	d.._im_softinit.
000540	1B	5F	73	6B	6F	77	5F	73-74	61	6E	64	61	72	64	5F	.._show_standard_
000550	6D	65	6E	75	5F	61	63	74-69	6F	6E	73	00	06	5F	62	menu_actions..._b
000560	64	72	5F	30	00	0F	5F	63-6C	6F	73	65	5F	64	61	74	dr_0..._close_dat
000570	61	62	61	73	65	00	05	5F-6D	6F	76	65	00	1C	5F	75	abase..._move..._u
000580	70	64	61	74	65	5F	6D	6F-75	73	65	5F	62	75	74	74	pdate_mouse_but
000590	6F	6E	5F	64	69	73	70	6C-61	79	00	1C	5F	77	61	69	on_display..._wai
0005A0	74	5F	66	6F	72	5F	6D	6F-75	73	65	5F	62	75	74	74	t_for_mouse_but
0005B0	6F	6E	5F	70	72	65	73	73-00	1E	5F	77	61	69	74	5F	on_press..._wait_

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0005C0	66	6F	72	5F	6D	6F	75	73-65	5F	62	75	74	74	6F	6E	for_mouse_button
0005D0	5F	72	65	6C	65	61	73	65-00	08	5F	69	6D	5F	77	6C	_release...im_wl
0005E0	75	74	00	08	5F	69	6D	5F-6D	61	73	6B	00	0B	5F	62	ut...im_mask...b
0005F0	75	69	6C	64	5F	6B	65	79-73	00	0A	5F	69	6D	5F	63	uild_keys...im_c
000600	73	74	61	72	74	00	A4	B4-0C	00	09	64	72	61	77	5F	start.....draw_
000610	67	72	69	64	00	84	8C	3C-00	00	5F	69	6D	5F	63	67	grid...<...im_cg
000620	72	61	62	00	0E	5F	6F	70-65	6E	5F	64	61	74	61	62	rab...open_datab
000630	61	73	65	00	09	5F	69	6D-5F	69	6E	6D	61	70	00	13	ase...im_inmap..
000640	5F	61	63	71	75	69	72	65-5F	69	6E	74	65	67	72	61	_acquire_integra
000650	74	65	64	00	55	B4	1F	00-10	61	63	71	39	36	67	6F	ted.U....acq96go
000660	5F	6D	76	70	5F	69	6E	69-74	00	0A	61	6C	74	65	72	_mvp_init...alter
000670	5F	67	72	69	64	00	B7	8C-0D	00	0A	5F	69	6D	5F	74	_grid.....im_t
000680	6F	64	69	73	6B	00	3B	B4-21	00	0D	61	63	71	5F	66	odisk...!...acq_f
000690	69	72	73	74	5F	39	36	77-00	0F	61	64	6A	75	73	74	inst_96w...adjust
0006A0	5F	67	72	69	64	5F	39	36-77	00	39	90	18	00	01	02	_grid_96w?... ..
0006B0	11	5F	61	63	71	39	36	67-6F	5F	69	74	65	6D	6D	69	...acq96go_itemli
0006C0	73	74	62	01	00	3E	B6	2E-00	00	01	11	61	63	71	5F	stb...>.....acq_
0006D0	61	6E	64	5F	61	6C	69	67-6E	5F	35	66	77	7A	05	00	and_align_96wz..
0006E0	12	64	65	66	69	6E	65	5F-65	00	0A	69	70	73	65	5F	.define_ellipse_
0006F0	39	36	77	6C	0E	00	38	90-14	00	01	02	0D	5F	61	63	96w...8....._ac
000700	71	39	36	67	6F	5F	6D	65-6E	75	DA	01	00	84	90	0F	q96go_menu.....
000710	00	00	01	08	5F	61	63	71-39	36	67	6F	00	00	00	7F	...._acq96go...
000720	B6	8B	00	00	01	09	78	5F-61	63	71	39	36	67	6F	32	.....x_acq96go2
000730	00	00	0C	64	72	61	77	5F-65	6C	6C	69	70	73	65	46	...draw_ellipseF
000740	12	00	14	62	75	69	6C	64-5F	69	6D	61	67	65	5F	66	...build_image_f
000750	69	6C	65	6E	61	6D	65	FA-08	00	09	64	72	61	77	5F	ilename....draw_
000760	67	72	69	64	16	15	00	10-61	63	71	39	36	67	6F	5F	grid....acq96go_
000770	6D	76	70	5F	69	6E	69	74-A4	12	00	0A	61	6C	74	65	mvp_init....alte
000780	72	5F	67	72	69	64	D4	14-00	0D	61	63	71	5F	66	69	r_grid....acq_fi
000790	72	73	74	5F	39	36	77	1C-07	00	0F	61	64	6A	75	73	rst_96w....adjus
0007A0	74	5F	67	72	69	64	5F	39-36	77	8E	0C	00	01	88	04	t_grid_96w.....
0007B0	00	00	A2	01	D1	A0	44	01-02	00	00	61	63	71	69	6D	.....D....acqim
0007C0	67	00	00	70	69	00	00	41-75	74	6F	6D	61	74	69	63	g...pi...Automatic
0007D0	20	61	63	71	75	69	73	69-74	69	6F	6E	20	73	65	71	acquisition seq
0007E0	75	65	6E	63	65	00	41	64-6A	75	73	74	20	67	72	69	uence.Adjust gri
0007F0	64	20	6C	6F	63	61	74	69-6F	6E	20	61	6E	64	20	73	d location and s
000800	69	7A	65	00	53	75	72	72-6F	75	6E	64	20	6C	61	72	ize.Surround lar
000810	67	65	73	74	20	63	6F	6C-6F	6E	79	20	69	6E	20	67	gest colony in g
000820	72	69	64	20	63	65	6C	6C-20	0A	28	49	6E	73	63	72	rid cell .(Inscr
000830	69	62	65	64	20	65	6C	6C-69	70	73	65	20	69	73	20	ibed ellipse is
000840	74	68	65	20	64	65	66	61-75	6C	74	29	00	41	6C	74	the default).Alt
000850	65	72	6E	61	74	65	20	42-65	74	77	65	65	6E	20	49	ernate Between I
000860	6D	61	67	65	73	20	56	69-65	77	65	64	00	41	63	71	images Viewed.Acq
000870	75	69	73	69	74	69	6F	6E-20	63	6F	6D	70	6C	65	74	uision complet
000880	65	2C	0A	53	65	6C	65	63-74	20	74	6F	20	63	6F	6E	e..Select to con
000890	74	69	6E	75	65	20	61	6E-61	6C	79	73	69	73	00	41	tinue analysis.A

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0008A0	63	71	75	69	72	65	20	20-20	20	20	20	20	20	20	20	20	20	acquire
0008B0	69	6D	61	67	65	00	41	63-71	75	69	72	65	20	20	20	20	20	image.Acquire
0008C0	20	20	20	20	20	20	20	69-6D	61	67	65	00	41	63	71	20	20	image.Acq
0008D0	75	69	72	65	20	20	20	20-20	20	20	20	20	20	20	69	6D	20	uire im
0008E0	61	67	65	00	41	63	71	75-69	72	65	20	20	20	20	20	20	20	age.Acquire
0008F0	20	20	20	20	20	69	6D	61-67	65	00	8E	A0	B9	03	02	20	20	image.....
000900	38	02	42	69	6F	6C	6F	67-69	63	61	6C	20	56	69	73	20	20	8.Biological Vis
000910	69	6F	6E	20	20	2D	20	20-49	6D	61	67	65	20	41	63	20	20	ion - Image Ac
000920	71	75	69	73	69	74	69	6F-6E	00	49	6D	61	67	65	20	20	20	quisition.Image
000930	41	63	71	75	69	73	69	74-69	6F	6E	20	4D	65	6E	75	20	20	Acquisition Menu
000940	00	43	6F	75	6C	64	20	6E-6F	74	20	6F	70	65	6E	20	20	20	.Could not open
000950	74	68	65	20	64	61	74	61-62	61	73	65	20	66	69	6C	20	20	the database fil
000960	65	2E	00	43	6F	75	6C	64-20	6E	6F	74	20	66	69	6E	20	20	e..Could not fin
000970	64	20	65	78	70	65	72	69-6D	65	6E	74	20	72	65	63	20	20	d experiment rec
000980	6F	72	64	20	69	6E	20	64-61	74	61	62	61	73	65	20	20	20	ord in database
000990	66	6F	72	20	68	65	79	20-25	6C	64	2E	00	43	6F	75	20	20	for key %ld..Cou
0009A0	6C	64	20	6E	6F	74	20	6F-70	65	6E	20	74	68	65	20	20	20	ld not open the
0009B0	73	74	61	6E	64	61	72	64-73	20	66	69	6C	65	20	66	20	20	standards file f
0009C0	6F	72	20	6B	65	79	20	25-6C	64	2E	00	00	41	63	71	20	20	or key %ld...Acq
0009D0	75	69	72	65	20	00	20	69-6D	61	67	65	00	41	43	51	20	20	uire . image.ACQ
0009E0	55	49	53	49	54	49	4F	4E-20	2D	20	39	36	2D	57	45	20	20	UISION - 96-WE
0009F0	4C	4C	00	41	43	51	55	49-53	49	54	49	4F	4E	20	2D	20	20	LL.ACQUISITION -
000A00	20	39	36	2D	57	45	4C	4C-00	41	6C	69	67	6E	20	25	20	20	96-WELL.Align %
000A10	73	20	69	6D	61	67	65	20-77	69	74	68	20	67	72	69	20	20	s image with gri
000A20	64	2C	20	70	72	65	73	73-20	6D	6F	75	73	65	20	62	20	20	d, press mouse b
000A30	75	74	74	6F	6E	20	77	68-65	6E	20	64	6F	6E	65	2E	20	20	utton when done.
000A40	00	54	68	65	20	67	61	69-6E	20	61	6E	64	20	6F	66	20	20	.The gain and of
000A50	66	73	65	74	20	76	61	6C-75	65	20	66	6F	72	20	69	20	20	fset value for i
000A60	6D	61	67	65	20	25	73	20-61	72	65	20	25	33	64	20	20	20	mage %s are %3d
000A70	61	6E	64	20	25	33	64	2E-00	53	61	76	69	6E	67	20	20	20	and %3d..Saving
000A80	61	63	71	75	69	72	65	64-20	69	6D	61	67	65	20	74	20	20	acquired image t
000A90	6F	20	64	69	73	6B	20	3A-20	25	73	00	25	73	25	73	20	20	o disk : %s.%s%
000AA0	25	73	2E	25	73	25	73	25-64	00	25	73	25	73	25	64	20	20	%s.%s%sd.%s%sd
000AB0	25	73	2E	25	73	25	73	00-41	6C	69	67	6E	20	25	73	20	20	%s.%s%s.Align %s
000AC0	20	69	6D	61	67	65	20	75-6E	64	65	72	20	63	61	6D	20	20	image under cam
000AD0	65	72	61	2C	20	6D	69	6E-69	6D	69	7A	69	6E	67	20	20	20	era, minimizing
000AE0	74	68	65	20	66	65	61	74-75	72	65	73	20	6F	66	20	20	20	the features of
000AF0	74	68	65	00	64	69	66	66-65	72	65	6E	63	65	20	69	20	20	the.difference i
000B00	6D	61	67	65	2E	20	20	50-72	65	73	73	20	6D	6F	75	20	20	mage. Press mou
000B10	73	65	20	62	75	74	74	6F-6E	20	77	68	65	6E	20	64	20	20	se button when d
000B20	6F	6E	65	2E	00	50	72	65-73	73	20	61	6E	79	20	62	20	20	one..Press any b
000B30	75	74	74	6F	6E	20	74	6F-20	00	61	63	63	65	70	74	20	20	utton to .accept
000B40	20	69	6D	61	67	65	20	61-6C	69	67	6E	6D	65	6E	74	20	20	image alignment
000B50	2E	00	54	68	65	20	67	61-69	6E	20	61	6E	64	20	6F	20	20	..The gain and o
000B60	66	66	73	65	74	20	76	61-6C	75	65	20	66	6F	72	20	20	20	ffset value for
000B70	69	6D	61	67	65	20	25	73-20	61	72	65	20	25	33	64	20	20	image %s are %3d

```

and %3d..Saving
acquired image
to disk : %s.Adj
ust grid positio
n and dimensions
using the mouse
..Move mouse to
move grid..Hold
down left button
to.change grid
dimensions..(mov
es lower right c
orner)..Press rig
ht button to.ret
urn to the menu.
.Adjust position
and dimensions
of the elliptica
l region using t
he mouse.....e.
.Move mouse to m
ove region..Hold
down left butto
n to.change dime
nsions of.area o
f interest..Pres
s right button t
o.return to the
menu.....@.d.2
.....D.....H
...3.....
.&.....&.+
.....&.1....
.....&.....
.&.....&..
.....&.....
.&.).....
.....-.....
.....b...../.
...VQ....v..j..
^..R..F..:"
.....#.....9.D..
v.Copyright (c)

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000E60	31	39	38	39	2C	20	42	69-6F	6C	6F	67	69	63	61	6C	1989, Biological
000E70	20	56	69	73	69	6F	6E	20-49	6E	63	2E	20	20	41	6C	Vision Inc. Al
000E80	6C	20	72	69	67	68	74	73-20	72	65	73	65	72	76	65	l rights reserve
000E90	64	00	4B	A0	36	00	01	00-00	CB	00	00	00	1E	B8	00	d.K.6.....
000EA0	00	8E	DB	8B	46	06	A3	5E-01	8B	46	08	A3	60	01	8B	....F...^..F....
000EB0	46	0A	0B	46	0C	74	0D	8B-46	0A	8B	56	0C	A3	4C	01	F..F.t..F..V..L.
000EC0	89	16	4E	01	0E	E8	00	00-1F	C9	CB	67	9C	14	00	84	..N.....g....
000ED0	2D	56	15	C4	29	9D	C4	25-9D	C4	14	9D	C4	0E	9D	C8	-V...)%.....
000EE0	06	9D	D5	A0	0A	00	03	00-00	00	00	00	00	00	00	53	.....S
000EF0	9C	0D	00	CB	04	56	48	CB-02	56	38	C8	00	56	36	41	.....VH..VB..V6A
000F00	A0	B6	03	01	32	00	CB	FE-00	00	57	56	1E	B8	00	00	....2.....WV....
000F10	8E	DB	1E	6B	3B	02	9A	00-00	00	00	83	C4	04	1E	6B	...hB.....h
000F20	60	02	9A	00	00	00	00	83-C4	04	9A	00	00	00	00	9A	.....
000F30	00	00	00	00	9A	00	00	00-00	9A	00	00	00	00	00	9A	.....
000F40	00	00	00	89	46	F0	89	56-F2	0B	D2	7F	0F	7D	05	3D	....F..V....i.=
000F50	01	00	73	0B	2B	C0	89	46-F2	89	46	F0	9A	00	00	00	..s.+..F..F....
000F60	00	9A	00	00	00	00	89	46-F0	89	56	F2	0B	D2	7F	0F	.....F..V....
000F70	7C	05	3D	01	00	73	0B	2B-C0	89	46	F2	89	46	F0	9A	i.=..s.+..F..F..
000F80	00	00	00	00	0B	C0	75	1E-9A	00	00	00	00	1E	6B	77	.....u.....hw
000F90	02	9A	00	00	00	00	83	C4-04	6A	00	9A	00	00	00	00	.....j.....
000FA0	83	C4	02	BE	06	00	00	8B-46	F0	8B	56	F2	26	A3	04	.....F..V.&..
000FB0	00	26	89	16	06	00	6A	05-6A	05	B8	00	00	BA	00	00	..&....j.j.....
000FC0	52	50	9A	00	00	00	00	83-C4	0B	0B	C0	75	21	9A	00	RP.....u!..
000FD0	00	00	00	FF	76	F2	FF	76-F0	1E	68	99	02	9A	00	00	....v..v..h....
000FE0	00	00	83	C4	0B	6A	00	9A-00	00	00	00	83	C4	02	FF	....j.....
000FF0	76	F2	FF	76	F0	9A	00	00-00	00	83	C4	04	89	46	F6	v..v.....F.
001000	89	56	F8	0B	D0	75	21	9A-00	00	00	00	FF	76	F2	FF	.V...u!.....v..
001010	76	F0	1E	6B	D3	02	9A	00-00	00	00	83	C4	0B	6A	00	v..h.....j..
001020	9A	00	00	00	00	83	C4	02-BB	0A	00	BA	00	00	52	50	.....RP.....RP
001030	BB	0B	00	52	50	BB	06	00-52	50	BB	04	00	52	50	BB	...RP...RP...RP.
001040	0A	00	BA	00	00	52	50	BB-0B	00	52	50	BB	06	00	52	.....RP...RP...R
001050	50	BB	04	00	52	50	BB	02-00	52	50	BB	00	00	52	50	F...RP...RP...RP
001060	9A	00	00	00	00	83	C4	2B-9A	00	00	00	00	89	86	16	.....(.....
001070	FF	89	96	1B	FF	9A	00	00-00	00	89	86	1A	FF	89	96	.....
001080	1C	FF	9A	00	00	00	00	89-86	1E	FF	89	96	20	FF	9A	.....
001090	00	00	00	00	89	86	22	FF-89	96	24	FF	1E	6B	4A	01	....."....\$..hJ.
0010A0	1E	6B	4B	01	9A	00	00	00-00	83	C4	0B	9A	00	00	00	.hH.....
0010B0	00	83	3E	4B	01	00	75	13-83	3E	4A	01	00	75	0C	C7	..>H..u..>J..u..
0010C0	06	4B	01	CC	00	C7	06	4A-01	33	00	FF	36	4A	01	9A	.H.....J.3..6J..
0010D0	00	00	00	00	83	C4	02	FF-36	4B	01	9A	00	00	00	00	.....6H.....
0010E0	83	C4	02	2B	F6	8D	86	16-FF	89	86	12	FF	8C	96	14	...+.....
0010F0	FF	C4	9E	12	FF	26	C4	1F-B9	01	00	56	BF	02	03	8B	.....&.....V....
001100	F3	1E	1E	06	1F	07	D1	E9-1B	C0	3B	C9	F3	A7	75	04	.....;....u.
001110	2B	CB	F3	A6	1F	5E	74	03-E9	5D	02	89	76	FC	C7	46	+....^t..J..v..F
001120	F4	00	00	0B	F6	7F	03	E9-D1	00	8D	86	2B	FF	89	86	.....(....
001130	12	FF	8C	96	14	FF	8D	86-16	FF	89	86	0E	FF	8C	96	.....

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001140	10	FF	BE	A6	01	8B	7E	FC-8B	C7	01	46	F4	B9-09	00	.....~.....F.....
001150	56	57	BE	03	03	C4	BE	12-FF	D1	E9	F2	A5	13	C9	VW.....
001160	A4	5F	5E	C4	9E	0E	FF	26-8B	07	26	8B	57	02	8B	..^.....&...&..W...
001170	B9	9E	06	FF	B9	96	08	FF-57	56	C4	BE	06	FF	1E	.....WV.....
001180	B6	12	FF	B9	FF	FF	33	C0-F2	AE	F7	D1	2B	F9	8B	.....3.....+...
001190	B7	FE	8C	DA	06	8E	C2	1F-B9	FF	FF	F2	AE	4F	8B	.....0..
0011A0	D1	E9	F2	A5	13	C9	F2	A4-1F	5E	5F	57	56	BF	0C	.....^_WV...
0011B0	BC	D8	8E	C0	1E	C5	B6	12-FF	B9	FF	FF	33	C0	F2	.....3...
0011C0	F7	D1	2B	F9	8B	D9	87	FE-06	8E	C2	1F	B9	FF	FF	..+.....
0011D0	AE	4F	8B	CB	D1	E9	F2	A5-13	C9	F2	A4	1F	5E	5F	..0.....^_...
0011E0	B6	12	FF	B9	04	89	54	02-83	86	12	FF	32	83	86	.....T.....2...
0011F0	FF	04	83	C6	0C	4F	74	03-E9	52	FF	8B	46	FC	B9	.....0t...R...F...F
001200	F4	3D	04	00	7D	7B	8B	D9-D1	E0	03	C2	D1	E0	D1	..=...3t.....
001210	89	86	02	FF	8B	F0	81	C6-9E	01	8B	F8	81	C7	A0	.....
001220	05	A2	01	89	86	0C	FF	8B-86	02	FF	05	A4	01	B9	.....
001230	0E	FF	8B	86	02	FF	05	A6-01	89	86	12	FF	B8	04	.....
001240	2B	C2	8B	C8	01	4E	F4	C7-04	00	00	C7	05	00	00	+....N.....
001250	9E	0C	FF	C7	07	00	00	8B-9E	0E	FF	C7	07	00	00	.....
001260	9E	12	FF	2B	C0	89	47	02-89	07	83	C6	0C	83	C7	...+...G.....
001270	83	86	0C	FF	0C	83	86	0E-FF	0C	83	86	12	FF	0C	.....
001280	C6	C7	46	F4	05	00	B8	04-00	2B	46	FC	8B	F8	BE	..F.....+F.....n
001290	01	B9	04	00	29	3C	83	C6-0C	E2	F9	0E	E8	00	00	.....)(<.....
0012A0	3E	5E	01	00	75	5A	83	7E-FC	01	7C	0F	FF	B6	18	>>...uZ...^...i.....
0012B0	FF	B6	16	FF	0E	E8	00	00-3D	9C	0F	01	87	B0	56	.....=.....Va
0012C0	C7	9B	9D	87	97	56	5E	C7-89	9D	C7	31	9D	C7	26	.....V^.....1...&..
0012D0	C7	1B	9D	C7	1B	9D	C7	12-9D	C6	A8	9D	C6	4D	9D	.....M...
0012E0	3D	9D	C5	F7	9D	CD	D6	56-49	C5	D3	9D	CD	CA	56	=.....VI.....V6
0012F0	C5	C7	9D	C5	C1	9D	C5	BB-9D	C5	B4	9D	C5	AD	9D	.....
001300	A7	56	50	CD	9F	56	3D	C5-9C	9D	C5	98	9D	CD	8A	..VP...V=.....V
001310	0D	CD	7D	56	0C	CD	70	56-09	CD	63	56	05	CD	5B	..3V...pV...cV...IV
001320	11	C5	56	56	48	C5	51	56-48	C5	4C	56	48	C5	47	..VVH.QVH.LVH.GV
001330	48	C5	42	56	48	C9	3D	56-48	C5	3A	56	48	C5	35	H.BVH.=VH.:VH.5V
001340	38	C5	30	56	38	C5	2B	56-38	C9	26	56	38	C5	23	8.OVB.+V8.&V8.#V
001350	38	CD	1B	56	3A	CD	11	56-37	C5	0E	9D	CD	02	56	8...V:...V7.....V.
001360	CC	F0	56	44	CC	E2	56	3A-CC	D8	56	37	C4	D5	9D	..VD...V:...V7.....
001370	C9	56	14	CC	BD	56	1B	C8-B8	56	3C	C4	B5	56	3C	.V...V...V<...V<..
001380	AE	56	36	C4	A9	56	36	C4-9F	9C	CC	96	56	3A	CC	.V6..V6.....V:...V
001390	56	37	C4	B9	9D	CC	83	56-14	CC	7A	56	5B	CC	5C	V7.....V...zVl.VV
0013A0	23	CC	57	56	57	CC	39	56-23	CC	34	56	54	CC	2F	#.WVW.9V#.4VT./V
0013B0	2B	CC	2A	56	29	CC	25	56-27	CC	1D	56	3B	C4	1A	+.*V).%V'.V;...
0013C0	CC	11	56	4B	C4	0E	9D	C8-08	9D	8B	A0	B5	03	01	..VK.....
0013D0	03	83	C4	04	0E	E8	00	00-C7	46	F4	02	00	83	7E	.....F.....~
0013E0	02	7C	32	8D	86	1A	FF	89-86	06	FF	8C	96	08	FF	..12.....
0013F0	7E	FC	8B	76	F4	C4	9E	06-FF	26	FF	77	02	26	FF	~..V.....&..w.&..7
001400	56	0E	E8	00	00	83	C4	06-83	86	06	FF	04	46	3B	V.....F;-
001410	7E	E3	89	76	F4	0E	E8	00-00	1E	68	13	03	1E	68	^..v.....h...h.

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001420	01 9A 00 00 00 00 B3 C4-08 9A 00 00 00 00 d3 3E	.....>
001430	5E 01 00 75 1E 6A 05 1E-68 DA 01 9A 00 00 00 00 00	^..u.j..h.....
001440	B3 C4 06 6A 01 6A 05 1E-68 DA 01 9A 00 00 00 00 00	...j.j..h.....
001450	B3 C4 08 C7 46 FA 00 00-8B 7E FC 8B 76 F4 6B 00	....F....~..v.h.
001460	00 68 00 00 1E 68 DA 01-9A 00 00 00 00 B3 C4 08	.h...h.....
001470	89 B6 26 FF 9A 00 00 00-00 8B 86 26 FF 2D 01 00	..&.....&-...
001480	3D 08 00 76 03 E9 5F 01-03 C0 93 2E FF A7 02 06	=..v..._.....
001490	90 B3 86 12 FF 04 46 B3-FE 04 7C 03 E9 95 FD E9	.....F...l.....
0014A0	68 FD 90 B3 FF 01 7C 0F-FF B6 18 FF FF B6 16 FF	h.....l.....
0014B0	0E E8 00 00 B3 C4 04 0E-E8 00 00 BE 02 00 3B FE	.....:.....
0014C0	7C 29 8D 86 1A FF 89 86-06 FF 8C 96 0B FF C4 9E	!.....
0014D0	06 FF 26 FF 77 02 26 FF-37 56 0E E8 00 00 B3 C4	..&.w.&.7v.....
0014E0	06 B3 86 06 FF 04 46 3B-F7 7E E3 0E E8 00 00 E9	.....F;~.....
0014F0	0F 01 90 0E E8 00 00 E9-07 01 90 6A 00 6A 00 9A	.....j.j..
001500	00 00 00 00 B3 C4 04 6A-01 0E E8 00 00 B3 C4 02	.....j.....
001510	1E 68 00 00 9A 00 00 00-00 B3 C4 04 6A 00 6A 02	.h.....j.j..
001520	9A 00 00 00 00 B3 C4 04-6A 14 6A 01 6A 00 6A 01	.....j.j.j.j..
001530	6A 00 6A 02 9A 00 00 00-00 B3 C4 0C 6A 01 6A 01	j.j.....j.j..
001540	6A 00 9A 00 00 00 00 B3-C4 06 6A 01 6A 02 6A FF	j.....j.j.j..
001550	6A 00 9A 00 00 00 00 B3-C4 08 6A 01 6A 02 6A FF	j.....j.j.j..
001560	6A 00 9A 00 00 00 00 B3-C4 08 6A 00 6A 01 9A 00	j.....j.j..
001570	00 00 00 B3 C4 04 6A 01-6A 01 9A 00 00 00 00 B3	.....j.j.....
001580	C4 04 1E 68 29 03 1E 68-DA 01 9A 00 00 00 00 B3	...h)..h.....
001590	C4 0B EB 6D 90 B3 FF 01-7C 67 FF B6 18 FF FF B6	...m.....lg.....
0015A0	16 FF 0E E8 00 00 B3 C4-04 EB 56 B3 FF 02 7C 51	.....v...10
0015B0	FF B6 1C FF FF B6 1A FF-6A 02 0E E8 00 00 B3 C4	.....j.....
0015C0	06 EB 3E B3 FF 03 7C 39-FF B6 20 FF FF B6 1E FF	..>...19... ..
0015D0	6A 03 EB E6 90 B3 FF 04-7C 27 FF B6 24 FF FF B6	j.....!'.\$....
0015E0	22 FF 6A 04 EB D4 90 C7-46 FA 01 00 EB 13 90 B6	".j.....F.....
0015F0	04 06 05 FE 04 0E 05 FA-05 A8 05 BE 05 D6 05 E8	.....
001600	05 6A 14 6A 14 9A 00 00-00 00 B3 C4 04 B3 7E FA	.j.j.....~.
001610	00 75 03 E9 48 FE 89 76-F4 8E 06 02 00 26 FF 36	.u..H..v.....&.6
001620	0A 00 26 FF 36 0B 00 26-FF 36 06 00 26 FF 36 04	..&.6..&.6..&.6.
001630	00 8E 06 04 00 26 FF 36-0A 00 26 FF 36 0B 00 26	....&.6..&.6..&.
001640	FF 36 06 00 26 FF 36 04-00 26 FF 36 02 00 26 FF	.6..&.6..&.6..&.
001650	36 00 00 9A 00 00 00 00-B3 C4 14 FF 36 4A 01 FF	6.....6J..
001660	36 4B 01 9A 00 00 00 00-B3 C4 04 FF 76 FB FF 76	6H.....v..v..
001670	F6 9A 00 00 00 00 B3 C4-04 FF 76 FB FF 76 F6 9A	.....v..v..
001680	00 00 00 00 B3 C4 04 BE-06 04 00 26 FF 36 0A 00	.....&.6..
001690	26 FF 36 0B 00 26 FF 36-06 00 26 FF 36 04 00 26	&.6..&.6..&.6..&.
0016A0	FF 36 02 00 26 FF 36 00-00 9A 00 00 00 00 B3 C4	.6..&.6.....
0016B0	0C B3 3E 60 01 00 75 07-6A 03 6A 01 EB 05 90 6A	..>'..u.j.j....j
0016C0	03 6A 00 9A 00 00 00 00-B3 C4 04 6A 00 6A 00 9A	.j.....j.j..
0016D0	00 00 00 00 B3 C4 04 6A-01 0E E8 00 00 B3 C4 02	.....j.....
0016E0	1E 68 00 00 9A 00 00 00-00 B3 C4 04 6A 00 6A 02	.h.....j.j..
0016F0	9A 00 00 00 00 B3 C4 04-1E 68 DA 01 9A 00 00 00	.....h.....

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001700	00	B3	C4	04	1F	5E	5F	C9-CB	C8	50	00	00	1E	B8	00	.....^....P.....
001710	00	8E	DB	9A	00	00	00	00-FF	76	08	FF	76	06	1E	68	.....v...v...h
001720	3F	03	8D	46	B0	16	50	9A-00	00	00	00	83	C4	0C	8D	?..F...P.....
001730	46	B0	16	50	6A	00	9A	00-00	00	00	83	C4	06	B8	00	F...Pj.....
001740	04	BA	00	00	52	50	52	50-52	50	68	00	01	6A	00	6A	....RPRPRPh...j.j
001750	00	6A	00	9A	00	00	00	00-83	C4	14	68	FF	00	9A	00	.j.....h....
001760	00	00	00	B3	C4	02	6A	00-6A	03	9A	00	00	00	00	B3	.....j.j.....
001770	C4	04	FF	36	4A	01	9A	00-00	00	00	83	C4	02	FF	36	...6J.....6
001780	48	01	0D	9C	66	01	C7	AF-9D	CF	A6	56	47	C7	A3	9D	H...f.....V6...
001790	CF	9A	56	26	CF	8E	56	56-CF	83	56	55	CB	71	54	05	..V6...VV...VU..dT.
0017A0	E7	6E	54	05	CF	66	56	46-CF	57	56	08	C7	4F	9D	CF	.nT...fVF..WV...D..
0017B0	43	56	2B	CB	3E	9D	CF	2C-56	10	C7	29	9D	CF	20	56	CV+...>...V...V...V
0017C0	26	CF	14	56	2C	C7	11	9F-97	0A	56	2A	CE	FF	56	26	%...V.....V*..V6
0017D0	CE	F3	56	51	C6	E2	9D	CE-D9	56	4C	C6	D6	56	48	C6	..VQ.....VL...VH.
0017E0	D1	56	48	C6	CC	56	48	C6-C7	56	48	C6	C2	56	48	C6	.VH...VH...VH...VH.
0017F0	BD	56	48	C6	B8	9C	CE	AF-56	3F	CE	A1	56	2D	CE	93	.VH.....V7...V-...
001800	56	43	C6	90	9D	C6	8C	9D-CE	83	56	1F	C6	80	56	48	VC.....V...VH
001810	C6	7B	56	48	C6	76	56	48-C6	71	56	48	C6	6C	56	48	.(VH.vVH.gVH.lVH
001820	C6	67	56	48	C6	62	9C	C6-5E	56	38	C6	59	56	38	C6	.gVH.b...V6.yV6.
001830	54	56	38	C6	4F	56	38	C6-4A	9C	CE	35	56	4A	C6	2E	TV6.QV6.J...5VJ..
001840	8E	C6	2C	8E	C6	2A	8E	C6-2B	8E	C6	26	8E	C6	24	8E	.....*...&...\$.
001850	C6	22	8E	C6	20	8E	C6	1E-8E	85	EB	56	03	85	D3	56	.."......V...V
001860	61	CD	BA	56	0B	C5	B7	9D-C5	83	9D	CD	AA	56	34	CD	a..V.....V4.
001870	9E	56	33	CD	92	56	31	CD-82	56	31	CD	72	56	2F	CD	.V3...V1...V1.rV/.
001880	64	56	2E	CD	50	56	26	CD-44	56	2C	C5	41	9F	85	3A	dV...FV6.DV...A...:
001890	56	24	CD	2F	56	26	85	24-56	62	85	1C	56	06	85	0B	v*..V6%.*Vb...V...:
0018A0	56	03	84	EB	56	62	84	E1-56	61	C4	BD	5E	CC	A4	56	V...Vb...Va...V...v
0018B0	54	CC	9B	56	12	C4	95	9D-D4	91	56	54	CB	8E	56	54	T..V.....VT...VT
0018C0	CC	7B	56	0F	C4	78	9D	CC-6B	56	0E	C4	68	9D	C4	5F	.(V...x...kV...h...
0018D0	9D	CC	59	56	4E	CC	51	56-0B	C4	4E	9D	C4	4A	9D	84	..YVN..QV...N...J..
0018E0	46	56	06	84	32	56	03	84-05	56	62	67	A0	E9	01	01	FV...2V...Vbq....
0018F0	95	07	9A	00	00	00	00	83-C4	02	6A	02	9A	00	00	00	.....j.....
001900	00	83	C4	02	6A	FF	9A	00-00	00	00	83	C4	02	9A	00	....j.....
001910	00	00	00	9A	00	00	00	00-6A	00	9A	00	00	00	00	83	.....j.....
001920	C4	02	9A	00	00	00	00	FF-36	4A	01	FF	36	48	01	FF	.....6J...6H..
001930	76	08	FF	76	06	1E	68	77-03	8D	46	B0	16	50	9A	00	v...v...hw...F...F..
001940	00	00	00	83	C4	10	8D	46-B0	16	50	6A	00	9A	00	00	.....F...Pj.....
001950	00	00	83	C4	06	6A	00	6A-02	9A	00	00	00	00	83	C4	.....j.j.....
001960	04	B8	00	02	BA	00	00	52-50	52	50	52	50	68	00	01	.....RPRPRPh...
001970	6A	00	6A	00	6A	00	9A	00-00	00	00	83	C4	14	6A	00	j.j.j.....j.j.
001980	6A	03	6A	00	9A	00	00	00-00	83	C4	06	6A	00	6A	06	j.j.....j.j.
001990	9A	00	00	00	00	83	C4	04-6A	01	6A	02	6A	FF	6A	00	.....j.j.j.j.
0019A0	9A	00	00	00	00	83	C4	08-6A	01	6A	02	6A	FF	6A	00	.....j.j.j.j.
0019B0	9A	00	00	00	00	83	C4	08-83	3E	60	01	00	75	30	B8	.....>'...u0.
0019C0	00	04	BA	00	00	52	50	52-50	52	50	68	00	01	6A	00	....RPRPRPh...j.
0019D0	6A	00	6A	00	9A	00	00	00-00	83	C4	14	6A	00	6A	01	j.j.....j.j.

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0019E0	6A 00 9A 00 00 00 00 00	B3-C4 06 6A 01 EB 03 90 6A	j.....j....j
0019F0	00 6A 00 9A 00 00 00 00	00-B3 C4 04 6A 01 0E E8 00	.j.....j....
001A00	00 83 C4 02 1E 68 00 00	00-1E 68 AF 03 1E 68 50 00	.....h....h...hP.
001A10	9A 00 00 00 00 00 83 C4	0C-1E 68 50 00 6A 01 9A 00	.....hP.j....
001A20	00 00 00 83 C4 06 1E 68	00 00 9A 00 00 00 00 83	.....h.....
001A30	C4 04 6A 00 6A 02 9A 00	00-00 00 00 83 C4 04 B8 00	..j.j.....
001A40	00 BA 00 00 52 50 9A 00	00-00 00 00 83 C4 04 9A 00	....RP.....
001A50	00 00 00 1F C9 CB 90 C8	00 00 1E B8 00 00 BE	.....
001A60	B8 83 3E 5C 01 00 74 31	FF 76 06 FF 36 5A 01 FF	..>\..t1.v..6Z..
001A70	36 58 01 FF 36 56 01 FF	36 54 01 FF 36 52 01 FF	6X..6V..6T..6R..
001A80	36 50 01 FF 36 4E 01 FF	36 4C 01 9A 00 00 00 00	6F..6N..6L.....
001A90	52 50 1E 68 D2 03 EB 2F	90 FF 36 5A 01 FF 36 58	RP.h.../.6Z..6X
001AA0	01 FF 36 56 01 FF 36 54	01 FF 36 52 01 FF 36 50	..6V..6T..6R..6P
001AB0	01 FF 76 06 FF 36 4E 01	FF 36 4C 01 9A 00 00 00	..v..6N..6L.....
001AC0	00 52 50 1E 68 E0 03 1E	68 00 00 9A 00 00 00 00	.RP.h...h.....
001AD0	83 C4 1E 1F C9 CB 90 A7	90 E3 00 CD DA 56 08 C5	.....V..
001AE0	D7 9F C5 D3 9D CD CB 56	39 C5 C8 9D C5 C4 9D C5	.....V9.....
001AF0	BD 9D C5 B9 9D C5 B5 9D	C5 B1 9D C5 AD 9D C5 A9	.....V9.....
001B00	9D C5 A2 9D CD 9A 56 39	C5 97 9D C5 93 9D C5 BF	.....V9.....
001B10	9D C5 8E 9D C5 87 9D C5	83 9D C5 7F 9D C5 7B 9D	.....f.
001B20	C5 71 9D C9 6B 9D CD 5D	56 4E CD 55 56 19 C9 50	.q..k..JVN.UV..F
001B30	56 22 C5 4D 56 22 CD 45	56 26 CD 39 56 60 C5 36	V".MV".EV%.9V'.6
001B40	9F CD 2D 56 46 C5 28 9F	CD 1F 56 08 C5 1C 9F C5	..-VF.(...V.....
001B50	18 9D C5 14 9F 85 0D 56	2A CD 02 56 26 CC F1 56	.....V*..V*..V
001B60	5C CC E3 56 55 C8 D1 54	05 C4 CE 54 05 C4 C8 9D	\..VU..T...T....
001B70	CC BF 56 31 CC AF 56 31	CC 9F 56 5D CC 93 56 5C	..V1..V1..V1..V\
001B80	CC 85 56 55 C8 73 54 05	C4 70 54 05 CC 68 56 26	..VU..tT..pT..hV%
001B90	CC 5C 56 46 CC 4D 56 08	C4 45 9D C4 3B 9D C4 37	..VF.MV..E...7
001BA0	9D CC 31 56 2B CC 29 56	5A CC 22 56 54 CC 1D 56	..1V+.)VZ."VT..V
001BB0	53 CC 15 56 5A CC 0B 56	58 CC 01 56 49 C5 A0 0A	S..VZ..VX..VI...
001BC0	00 03 06 00 00 00 00 00	00-00 00 4D 9C 0D 00 C8 04	.....M.....
001BD0	56 04 C8 02 56 07 C8 00	56 0A E2 A0 60 03 01 7A	V...V...V...'.z
001BE0	09 C8 5A 00 00 57 56 1E	B8 00 00 BE D8 B8 00 00	..Z..WV.....
001BF0	BA 00 00 52 50 9A 00 00	00-00 00 83 C4 04 FF 76 0A	...RP.....V.
001C00	FF 76 08 1E 68 EE 03 8D	46 B0 16 50 9A 00 00 00	.v..h...F..P....
001C10	00 83 C4 0C B8 00 00 BA	00 00 52 50 8D 46 B0 16	.....RP.F..
001C20	50 6A 01 6A 00 9A 00 00	00-00 00 83 C4 0C B8 00 00	Pj.j.....
001C30	BA 00 00 52 50 1E 68 2A	04 6A 01 6A 01 9A 00 00	...RP.h*.j.j....
001C40	00 00 83 C4 0C B8 00 00	00-BA 00 00 52 50 9A 00 00	.....RP...
001C50	00 00 83 C4 04 B8 00 00	00-BA 00 00 52 50 1E 68 5B	.....RP.h[
001C60	04 6A 02 6A 01 9A 00 00	00-00 00 83 C4 0C B8 00 00	.j.j.....
001C70	BA 00 00 52 50 1E 68 70	04 6A 02 6A 02 9A 00 00	...RP.hp.j.j....
001C80	00 00 83 C4 0C 6A 00 6A	02 9A 00 00 00 00 83 C4	.....j.j.....
001C90	04 68 00 02 68 00 02 6A	00 6A 00 9A 00 00 00 00	.h..h..j.j.....
001CA0	83 C4 08 6A 00 6A 01 9A	00 00 00 83 C4 04 6A	...j.j.....j
001CB0	00 6A 01 9A 00 00 00 00	00-B3 C4 04 B8 00 03 BA 00	.j.....

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001CC0	00 52 50 52 50 52 50 68-00 01 6A 00 6A 00 6A 00	.RPRPRPh..j.j.j.
001CD0	9A 00 00 00 00 83 C4 14-6A 00 9A 00 00 00 00 83	.....j.....
001CE0	C4 02 6A 00 6A 04 6A 04-6A 01 6A 07 9A 00 00 00	..j.j.j.j.j.....
001CF0	00 83 C4 0A 6A 03 6A 00-9A 00 00 00 00 83 C4 04	....j.j.....
001D00	6A 00 6A 00 9A 00 00 00-00 83 C4 04 6A 00 9A 00	j.j.....j...
001D10	00 00 00 83 C4 02 6A 03-6A 03 6A 02 6A 00 9A 00	.....j.j.j.j...
001D20	00 00 00 83 C4 08 2B F6-6A 02 9A 00 00 00 00 83	.....+j.....
001D30	C4 02 8D 46 AB 16 50 8D-46 AC 16 50 8D 46 AE 16	...F..P.F..P.F..
001D40	50 9A 00 00 00 00 83 C4-0C 8B F8 AB 02 74 03 BE	P.....t..
001D50	01 00 0B F6 74 D2 8F 7E-A6 8F 76 AA FF 76 AB 9A	....t...v..v..
001D60	00 00 00 00 83 C4 02 6A-00 6A 02 9A 00 00 00 00	.....j.j.....
001D70	83 C4 04 8E 06 06 00 26-8B 1E 00 00 8A 87 40 01	.....&.....&
001D80	2A E4 50 8E 06 08 00 26-8B 1E 00 00 8A 87 40 01	+P....&.....&
001D90	50 8E 06 0A 00 26 8B 1E-00 00 BA 87 40 01 50 6A	P....&.....&.Pj
001DA0	01 9A 00 00 00 00 83 C4-08 6A 01 6A 02 6A FF 6A	.....j.j.j.j
001DB0	00 9A 00 00 00 00 83 C4-08 6A 01 6A 02 6A FF 6A	.....j.j.j.j
001DC0	00 9A 00 00 00 00 83 C4-08 BB 00 04 BA 00 00 82	.....R
001DE0	50 52 50 52 50 68 00 01-6A 00 6A 00 6A 00 9A 00	PRPRPh..j.j.j...
001DE0	00 00 00 83 C4 14 6B FF-00 9A 00 00 00 00 83 C4	.....h.....
001DF0	02 9A 00 00 00 00 FF 3a-4A 01 FF 3a 4B 01 FF 7a	.....6J...6P..V
001E00	0A FF 76 08 1E 68 8B 04-2D 46 B0 16 50 9A 00 00	..v..h...F..F...
001E10	00 00 83 C4 10 8D 46 B0-16 50 6A 00 9A 00 00 00	.....F..Pj.....
001E20	00 83 C4 06 6A 00 6A 06-9A 00 00 00 00 83 C4 04	....j.j.j.j.....
001E30	6A 01 6A 02 6A FF 6A 00-9A 00 00 00 00 83 C4 08	j.j.j.j.....
001E40	6A 01 6A 02 6A FF 6A 00-9A 00 00 00 00 83 C4 08	.....>...u/.....
001E50	9A 00 00 00 00 83 3E 60-01 00 75 2F B8 00 04 BA	..RPRPRPh..j.j.j
001E60	00 00 52 50 52 50 52 50-68 00 01 6A 00 6A 00 6A	.....j.j.j...
001E70	00 9A 00 00 00 00 83 C4-14 6A 00 6A 01 6A 00 9A	.....j.j.j...
001E80	00 00 00 00 83 C4 06 6A-01 EB 02 6A 00 6A 00 9A	.....v.....
001E90	00 00 00 00 83 C4 04 FF-76 06 0E EB 00 00 83 C4	..h...h...hP....
001EA0	02 1E 68 00 00 1E 68 C0-04 1E 68 50 00 9A 00 00	.....hP.j.....
001EB0	00 00 83 C4 0C 1E 68 50-00 6A 01 9A 00 00 00 00	....h.....j
001EC0	83 C4 06 1E 68 00 00 9A-00 00 00 00 83 C4 04 6A	.j.....
001ED0	00 6A 02 9A 00 00 00 00-83 C4 04 BB 00 00 BA 00	.RP.....
001EE0	00 52 50 9A 00 00 00 00-83 C4 04 9A 00 00 00 00	.._.....WV.....
001EF0	1F 5E 5F C9 CB C8 0C 00-00 57 56 1E B8 00 00 8E	+.....RP.....
001F00	DB 2B FF BB 00 00 BA 00-00 52 50 9A 00 00 00 00	.....RP.h..j
001F10	83 C4 04 BB 00 00 BA 00-00 52 50 1E 68 E3 04 6A	.W.....
001F20	01 57 9A 00 00 00 00 83-C4 04 BB 00 00 AA 9C 77	RP.....w
001F30	52 50 9A 00 00 00 00 83-C4 04 BB 00 00 AA 9C 77	..ZV..RV..MV..JV
001F40	01 C7 5A 56 17 CF 52 56-19 CB 4D 56 17 C7 4A 56	..BVA.<..6V".3V"
001F50	17 CF 42 56 41 C7 3C 9D-CB 36 56 22 C7 33 56 22	+V..&V".#V"....
001F60	CF 2B 56 19 CB 26 56 22-CF 23 56 22 CB 1C 9D CF	.VN..V...V"...V"
001F70	0B 56 4E CF 03 56 19 CA-FE 56 22 C6 FB 56 22 CE	.V&..V'.....VF..
001F80	F3 56 26 CE E7 56 60 C6-E4 9F CE DB 56 46 C6 D6	...V.....
001F90	9F CE CD 56 0B C6 CA 9F-C6 C6 9D C6 C2 9F B6 BB	

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001FA0	56	2A	CE	AF	56	26	CE	9F-56	5C	CE	91	56	55	CA	7F	V*..V&..V\..VU.
001FB0	54	05	C6	7C	54	05	C6	76-9D	CE	70	56	54	CE	68	56	T..!T..v...pVT.hV
001FC0	31	CE	58	56	31	CE	48	56-5D	CE	3C	56	46	CE	2D	56	1.XV1.HV1.<VF.-V
001FD0	08	C6	25	9D	C6	1B	9D	C6-17	9D	CE	11	56	2B	CE	09	..Z.....V+..
001FE0	56	56	CD	FE	56	55	C9	EC-54	05	C5	E9	54	05	CD	E1	VV..VU..T...T...
001FF0	56	31	CD	D1	56	31	CD	C1-56	35	C5	BB	9D	C5	E7	56	V1..V1..V5.....V
002000	04	C5	B2	9C	C5	AD	9D	C5-A9	56	07	C5	A4	9C	C5	9D	.....V.....
002010	9D	C5	99	56	0A	C5	94	9C-CD	BB	56	26	CD	7F	56	52	...V.....V&..VR
002020	CD	61	56	32	CD	4A	56	30-CD	3E	56	28	CD	2E	56	25	.aV2.JVO.>V(...VZ
002030	CD	24	56	21	CD	18	56	1E-CD	0C	56	1C	CC	FA	56	1A	..%V!..V...V...V.
002040	CC	F0	56	55	CC	DE	54	0E-C4	DB	54	05	CC	D3	56	18	..VU..T...T...V.
002050	CC	C7	56	18	CC	BB	56	16-CC	A9	56	26	CC	9D	56	41	..V...V...V&..VA
002060	C4	96	9D	C8	9D	56	17	C4-8D	56	17	CC	85	56	41	C4	.....V...V...VA
002070	7E	9D	C8	78	56	17	C4	75-56	17	CC	6D	56	19	CC	68	~..xV..uV..mV..h
002080	56	17	C4	65	56	17	CC	5D-56	41	C4	56	9D	C8	50	56	V..eV..JVA.V..PV
002090	22	C4	4D	56	22	CC	45	56-41	C8	37	56	22	C4	34	56	".MV".EVA.7V"..4V
0020A0	22	CC	2C	56	08	C4	24	9D-CC	15	56	19	C8	10	56	22	"..V...\$...V...V"
0020B0	C4	0D	56	22	C8	08	9D	49-40	C8	02	01	D6	0C	BA	00	..V"...I.....
0020C0	00	52	50	1E	68	18	05	6A-02	6A	01	9A	00	00	00	00	.RP.h..j.j.....
0020D0	B3	C4	0C	B8	00	00	BA	00-00	52	50	1E	68	31	05	6A	.....RP.h1.j
0020E0	02	6A	03	9A	00	00	00	00-83	C4	0C	B8	00	00	BA	00	.j.....
0020F0	00	52	50	1E	68	4A	05	6A-02	6A	04	9A	00	00	00	00	.RP.hJ.j.j.....
002100	B3	C4	0C	B8	00	00	BA	00-00	52	50	1E	68	62	05	6A	.....RP.hb.j
002110	02	6A	05	9A	00	00	00	00-83	C4	0C	B8	00	00	BA	00	.j.....
002120	00	52	50	1E	68	7D	05	6A-02	6A	07	9A	00	00	00	00	.RP.h3.j.j.....
002130	B3	C4	0C	B8	00	00	BA	00-00	52	50	1E	68	93	05	6A	.....RP.h..j
002140	02	6A	08	9A	00	00	00	00-83	C4	0C	2B	F6	BD	46	F6	.j.....+..F.
002150	16	50	8D	46	FA	16	50	8D-46	FE	16	50	9A	00	00	00	.P.F..P.F..P....
002160	00	83	C4	0C	B9	46	F4	FF-76	F6	9A	00	00	00	00	83	.....F..v.....
002170	C4	02	F6	46	F6	02	74	06-BE	01	00	E9	A9	00	83	7E	...F..t.....^
002180	FE	00	75	09	B3	7E	FA	00-75	03	E9	9A	00	F6	46	F6	..u..~..u.....F.
002190	01	74	47	8E	06	04	00	26-A1	04	00	03	46	FE	3D	01	.tB....&....F.=.
0021A0	00	7D	03	B8	01	00	3D	2B-00	7E	03	B8	2B	00	BE	06	.3.....=+..~..+...
0021B0	04	00	26	A3	04	00	26	A1-06	00	03	46	FA	3D	01	00	..&...&....F.=..
0021C0	7D	03	B8	01	00	3D	3C	00-7E	03	B8	3C	00	BE	06	04	3.....=<..~..<....
0021D0	00	26	A3	06	00	BF	01	00-EB	3A	BE	06	04	00	26	A1	..&.....&..
0021E0	00	00	03	46	FE	79	02	2B-C0	3D	FF	01	7E	03	B8	FF	...F.y.+...~....
0021F0	01	8E	06	04	00	26	A3	00-00	26	A1	02	00	03	46	FA	.....&...&....F.
002200	79	02	2B	C0	3D	DF	01	7E-03	B8	DF	01	BE	06	04	00	y.+...=..~.....
002210	26	A3	02	00	6A	01	6A	02-B8	00	00	BA	00	00	52	50	&...j.j.....RP
002220	0E	E8	00	00	B3	C4	08	0B-F6	75	03	E9	1F	FF	89	7E	.....u.....~
002230	FC	89	76	F8	9A	00	00	00-00	BE	06	02	00	26	C7	06	..v.....&..
002240	00	00	00	00	26	C7	06	02-00	00	00	0B	FF	74	3A	BE	...&.....t:..
002250	06	04	00	26	A1	04	00	99-2B	C2	D1	F8	BE	06	02	00	...&.....+.....
002260	26	A3	04	00	BE	06	04	00-26	A1	06	00	99	2B	C2	D1	&.....&....+..
002270	F8	BE	06	02	00	26	A3	06-00	26	A1	04	00	26	A3	0B	.....&...&...&..

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002280	00	26	A1	06	00	26	A3	0A-00	BB	00	00	BA	00	00	52	.&....&.....R	
002290	50	9A	00	00	00	00	B3	C4-04	9A	00	00	00	00	1F	5E	P.....^	
0022A0	5F	C9	CB	90	C8	18	00	00-57	56	1E	BB	00	00	8E	DB	.....WV.....	
0022B0	C7	46	F2	05	00	B8	00	00-BA	00	00	52	50	9A	00	00	.F.....RP...	
0022C0	00	00	B3	C4	04	B8	00	00-BA	00	00	52	50	1E	6B	A7	.....RP.h.	
0022D0	05	6A	01	6A	00	9A	00	00-00	00	B3	C4	0C	B8	00	00	.j.j.....	
0022E0	BA	00	00	52	50	9A	00	00-00	00	B3	C4	04	B8	00	00	...RF.....	
0022F0	BA	00	00	52	50	1E	6B	F0-05	6A	02	6A	01	9A	00	00	...RP.h..j.j....	
002300	00	00	B3	C4	0C	B8	00	00-BA	00	00	52	50	1E	6B	0B	.....RP.h.	
002310	06	6A	02	6A	03	9A	00	00-00	00	B3	C4	0C	B8	00	00	.j.j.....	
002320	BA	00	00	52	50	1E	6B	24-06	6A	02	6A	04	9A	00	00	...RP.h*.j.j....	
002330	00	00	B3	C4	0C	B8	00	00-BA	00	00	52	50	1E	6B	39	.....RP.n9	
002340	06	6A	02	6A	05	9A	00	00-00	00	B3	C4	0C	B8	00	00	.j.j.....	
002350	BA	00	00	52	50	1E	6B	4B-06	6A	02	6A	07	9A	00	00	...RP.hK.j.j....	
002360	00	00	B3	C4	0C	B8	00	00-BA	00	00	52	50	1E	6B	61	.....RP.ha	
002370	06	6A	02	6A	0B	9A	00	00-00	00	B3	C4	0C	B8	06	04	.j.j.....	
002380	00	26	A1	00	00	D4	9C	73-01	C6	C5	56	4B	C6	C1	9C	.&.....s....VH...	
002390	CE	B8	56	41	C6	B1	9D	CA-AB	56	17	C6	AB	56	17	CE	..VA.....V...V...	
0023A0	A0	56	41	C6	99	9D	CA	93-56	17	C6	90	56	17	CE	B8	.VA.....V...V...	
0023B0	56	41	C6	B1	9D	CA	7B	56-17	C6	78	56	17	CE	70	56	VA....(V...xV...oV	
0023C0	41	C6	69	9D	CA	63	56	17-C6	60	56	17	CE	5B	56	41	A.i...cV...V...xVA	
0023D0	C6	51	9D	CA	4B	56	17	C6-4B	56	17	CE	40	56	41	C6	.Q...KV...HV...@VA	
0023E0	39	9D	CA	33	56	17	C6	30-56	17	CE	2B	56	19	CA	23	9...3V...0V...(V...#	
0023F0	56	17	C6	20	56	17	CE	1B-56	41	C6	11	9D	CA	0B	56	V...V...VA.....V	
002400	22	C6	0B	56	22	CE	00	56-19	C9	FB	56	22	C5	FB	56	"..V"...V...V"...V	
002410	22	C9	EE	9D	CD	DC	56	4E-CD	D4	56	19	C9	CF	56	22	".....VN...V...V"	
002420	C5	CC	56	22	C5	C9	56	3B-C5	C5	56	3B	C5	C1	56	3B	..V"...VB...VB...VB	
002430	C5	BD	56	3B	C5	B9	56	3B-C5	B5	9C	C5	AC	56	4B	C5	..VB...VB.....VH...	
002440	A8	9C	C5	A4	56	3B	C5	A0-9C	C5	97	56	4B	C5	93	9C	...VB...VB...wVT.	
002450	C5	B9	56	3B	C5	B2	56	3B-C5	7D	9C	CD	77	56	54	B5	dV...^VH.IVH.TVH.	
002460	64	56	5F	C9	5E	56	4B	C5-5B	56	4B	C5	54	56	4B	C5	P...=VH.9VH.5..."V	
002470	50	9C	C5	3D	56	4B	C5	39-56	4B	C5	35	9C	C5	22	56	H.....VH.....VH.	
002480	4B	C5	1E	9C	C5	15	56	4B-C5	11	9C	C4	FA	56	4B	C4	.VH.....VH.....V	
002490	F6	56	4B	C4	F2	9C	C4	DB-56	4B	C4	D7	9C	CC	AD	56	R...V2...VA...yV.	
0024A0	52	CC	9F	56	32	CC	86	56-41	C4	7F	9D	C8	79	56	17	.vV...nVA.g...aV...	
0024B0	C4	76	56	17	CC	6E	56	41-C4	67	9D	C8	61	56	17	C4	^V...VVA.0...IV...F	
0024C0	5E	56	17	CC	56	56	41	C4-4F	9D	C8	49	56	17	C4	46	V...>VA.7...1V...V	
0024D0	56	17	CC	3E	56	41	C4	37-9D	C8	31	56	17	C4	16	56	17	..&VA.....V...V.
0024E0	17	CC	26	56	41	C4	1F	9D-CB	19	56	17	C4	16	56	17	..VA.....V.....	
0024F0	CC	0E	56	41	C4	07	9D	CB-01	56	17	F1	A0	0B	03	01	...F.&....F.&....	
002500	9D	0F	89	46	F0	26	A1	02-00	89	46	EE	26	A1	04	00	&.....F...F.&....&	
002510	26	F7	2E	0B	00	03	46	F0-89	46	EA	26	A1	06	00	26	.....F...F.&....+	
002520	F7	2E	0A	00	03	46	EE	89-46	EB	26	A1	04	00	99	2B	.....F.&....+.	
002530	C2	D1	F8	05	05	00	89	46-FA	26	A1	06	00	99	2B	C2	.....F.....F.&	
002540	D1	F8	05	05	00	89	46	F8-8E	06	02	00	8B	46	FA	26	9....~.&....F.&9.	
002550	39	06	0B	00	7E	04	26	A3-0B	00	8B	46	FB	26	39	06		

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002560	0A 00 7E 04 26 A3 0A 00-8B 46 F0 26 39 06 00 00	..~.&....F.&9...
002570	7E 1E 8B 46 EA 26 39 06-00 00 7D 14 8B 46 EE 26	~...F.&9...>...F.&
002580	39 06 02 00 7E 0A 8B 46-EB 26 39 06 02 00 7C 3E	9....~...F.&9...1>
002590	8E 06 04 00 26 A1 04 00-8B CB D1 E0 D1 E0 03 C1	....&.....
0025A0	8E 06 02 00 26 03 06 04-00 03 46 F0 26 A3 00 00	....&.....F.&...
0025B0	8E 06 04 00 26 A1 06 00-8B CB D1 E0 03 C1 BE 06	....&.....
0025C0	02 00 26 03 06 06 00 03-46 EE 26 A3 02 00 6A 02	..&.....F.&...j.
0025D0	6A 02 9A 00 00 00 00 83-C4 04 68 FF 01 68 FF 01	j.....h..h..
0025E0	6A 00 6A 00 9A 00 00 00-00 83 C4 08 68 FF 00 6A	j.j.....h..j
0025F0	00 6A 00 6A 02 9A 00 00-00 83 C4 08 68 FF 00	.j.j.....h..
002600	6A 00 6A 00 6A 03 9A 00-00 00 00 83 C4 08 6A 02	j.j.j.....j.
002610	6A 02 EB 00 00 BA 00 00-52 50 0E EB 00 00 83 C4	j.....RP.....
002620	0B 2B F6 8E 7E EB 8D 46-F4 16 50 8D 46 FC 16 50	.+...F..P.F..P
002630	8D 46 FE 16 50 9A 00 00-00 00 83 C4 0C 89 46 EC	.F..P.....F..t
002640	FF 76 F4 9A 00 00 00 00-83 C4 02 F6 46 F4 02 74	.v.....F..t
002650	06 BE 01 00 E9 BF 00 83-7E FE 00 75 09 83 7E FC	.....u..~.
002660	00 75 03 E9 B0 00 6A 02-6A 02 B8 00 00 BA 00 00	.u.....j.j.....
002670	52 50 0E EB 00 00 83 C4-0B F6 46 F4 01 74 44 BE	RP.....F..tD.
002680	06 02 00 26 A1 0B 00 2B-46 FE 3D 02 00 7D 03 B8	...&...+F.=..3..
002690	02 00 3B 46 FA 7E 03 8B-46 FA 8E 06 02 00 26 A3	...;F.^..F.....&.
0026A0	0B 00 26 A1 0A 00 2B 46-FC 3D 02 00 7D 03 B8 02	...&...+F.=..3..
0026B0	00 3B 46 FB 7E 03 8B 46-FB 8E 06 02 00 26 A3 0A	...;F.^..F.....&.
0026C0	00 EB 40 8E 06 02 00 26-A1 00 00 03 46 FE 3B 46	..@.....&....F.;F
0026D0	F0 7D 03 8B 46 F0 3B 46-EA 7E 03 8B 46 EA 8E 06	.3..F.;F.^..F...
0026E0	02 00 26 A3 00 00 26 A1-02 00 03 46 FC 3B 46 EE	..&...&....F.;F.
0026F0	7D 03 8B 46 EE 3B C7 7E-02 8B C7 8E 06 02 00 26	3..F.;~.....&
002700	A3 02 00 6A 02 6A 02 B8-00 00 BA 00 00 52 50 0E	...j.j.....RP.
002710	EB 00 00 83 C4 0B 0B F6-75 03 E9 09 FF 89 76 F6	.....u.....v.
002720	9A 00 00 00 00 6A 02 6A-02 B8 00 00 BA 00 00 52	.....j.j.....R
002730	50 0E EE 00 00 83 C4 0B-6A 00 6A 00 6A 00 6A 02	P.....j.j.j.j.
002740	9A 00 00 00 00 83 C4 0B-6A 00 6A 00 6A 00 6A 03	.....j.j.j.j.
002750	9A 00 00 00 00 83 C4 0B-8E 06 02 00 26 A1 00 00	.....&....
002760	2B 46 F0 99 8E 06 04 00-26 F7 3E 04 00 8E 06 02	+F.....&.>....
002770	00 26 89 16 04 00 26 A1-02 00 2B 46 EE 99 8E 06	..&...&...+F....
002780	04 00 26 F7 3E 06 00 8E-06 02 00 26 89 16 06 00	..&.>.....&....
002790	BB 00 00 BA 00 00 52 50-9A 00 00 00 83 C4 04	.....RP.....
0027A0	9A 00 00 00 00 1F 5E 5F-C9 CB 90 CB 00 00 00 1E	.....^.....
0027B0	BB 00 00 8E DB FF 76 0C-9A 00 00 00 83 C4 02	.....v.....
0027C0	6A 02 9A 00 00 00 00 83-C4 02 C4 5E 06 26 FF 77	j.....^.&.w
0027D0	02 26 FF 37 9A 00 00 00-00 83 C4 04 C4 5E 06 26	..&.7.....^.&
0027E0	FF 77 0A 26 FF 77 0B 9A-00 00 00 00 83 C4 04 C4	..w.&.w.....
0027F0	5E 06 26 8B 47 0A 4B 50-26 8B 47 0B 48 50 9A 00	^.&.G.HP&.G.HP..
002800	00 00 00 83 C4 04 1F C9-CB 6F 9C 38 01 CE FD 56	.....o.B...v
002810	45 CE E6 56 45 CE D3 56-42 CE C1 56 40 CE B7 56	E..VE..VB..V@..V
002820	3E CA AF 9D CE 9F 56 4E-CE 97 56 19 CA 92 56 22	>.....VN..V...V"
002830	C6 BF 56 22 C6 8C 56 3B-C6 87 9C C6 83 56 48 C6	..V"..VB.....VH.

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002840	7E	9C	C6	76	56	38	C6	72-56	38	C6	6D	9C	C6	69	56	~..vVB.rVB.m..iv
002850	48	C6	64	9C	C6	5C	56	38-C6	58	9C	CE	4F	56	35	CE	H.d..vVB.X..OV5.
002860	3F	56	35	86	31	56	24	CA-2B	56	38	C6	28	56	38	CE	?V5.IV\$.+VB.(VB.
002870	1F	56	54	86	0F	56	24	CA-09	56	38	C6	06	56	38	C5	.VT..V\$.vVB..VB.
002880	FF	56	38	C5	FB	9C	C5	E6-56	38	C5	E2	56	38	C5	DE	.VB.....VB..VB..
002890	9C	C5	C7	56	38	C5	C3	9C-C5	BD	56	38	C5	B9	9C	C5	..VB.....VB....
0028A0	A2	56	38	C5	9E	56	38	C5-9A	9C	C5	83	56	38	C5	7F	.VB..VB.....VB.
0028B0	9C	85	72	56	24	C9	6C	56-38	C5	69	56	38	CD	42	56	..rV\$.IV8.IV8.BV
0028C0	52	CD	34	56	32	85	1A	56-24	C9	14	56	38	C5	11	56	R.4V2..V\$.vVB..V
0028D0	38	CD	05	56	35	CC	F4	56-35	CC	E3	56	20	CC	D1	56	B..V5..V5..V..V
0028E0	1D	C4	CA	56	38	C4	C3	56-38	C4	BE	9C	C4	B4	56	48	...VB..VB.....VH
0028F0	C4	B0	9C	C4	AC	56	38	C4-A5	56	38	C4	A0	9C	C4	94	.....VB..VB.....
002900	56	48	C4	90	9C	C4	8A	56-38	C4	80	56	38	C4	7a	56	VH.....VB..VB.vv
002910	38	C4	6C	56	38	C4	64	56-38	C4	5E	56	38	C4	5a	56	8.IV8.dVB..vVB.vv
002920	38	C4	50	56	38	C4	48	9C-C4	39	56	48	C4	2A	56	48	8.PV8.H..9VH.*VH
002930	C4	20	56	48	C4	1B	56	48-C4	11	56	48	C4	0C	56	48	.VH..VH..VH..VH
002940	C4	05	56	48	0D	A0	06	00-03	0C	00	00	00	4B	9C	05	..VH.....K..
002950	00	CB	00	54	05	3E	A0	B8-02	01	A4	12	CB	0a	00	00	...T.>.....
002960	57	56	1E	8B	00	00	8E	D8-8B	00	03	6B	00	D0	9A	00	WV.....n..h....
002970	00	00	00	83	C4	04	6A	00-6A	01	9A	00	00	00	00	83	.....j.j.....
002980	C4	04	6A	01	6A	01	9A	00-00	00	00	83	C4	04	2B	Fa	..j.j.....+
002990	8B	C6	8E	06	0C	00	26	8B-84	00	00	8B	FF	00	2B	C6	.....&.....+
0029A0	8B	F8	26	8A	84	00	00	26-8B	85	00	04	8B	C6	99	2B	...&.....&....+
0029B0	C2	D1	F8	8B	46	FA	26	8B-84	00	01	26	8B	85	00	03	....F.&.....&....
0029C0	2C	B0	26	8B	84	00	02	26-8B	85	00	05	46	81	FE	00	..&.....&....F...
0029D0	01	7C	BD	89	76	FE	6A	00-6A	02	9A	00	00	00	00	83	..i..v.j.j.....
0029E0	C4	04	6A	01	6A	02	6A	FF-6A	00	9A	00	00	00	00	83	..j.j.j.j.....
0029F0	C4	08	6A	01	6A	02	6A	FF-6A	00	9A	00	00	00	00	83	..j.j.j.j.....
002A00	C4	08	6B	FF	00	9A	00	00-00	00	83	C4	02	68	00	02	..h.....h..
002A10	6B	00	02	6A	00	6A	00	9A-00	00	00	00	83	C4	08	6A	h..j.j.....j
002A20	00	9A	00	00	00	00	83	C4-02	8E	06	06	00	26	8B	1E	.....&..
002A30	00	00	8A	87	40	01	2A	E4-50	8E	06	08	00	26	8B	1E	....@.*.P....&..
002A40	00	00	8A	87	40	01	50	8E-06	0A	00	26	8B	1E	00	00	....@.P....&....
002A50	8A	87	40	01	50	6A	01	9A-00	00	00	00	83	C4	08	6A	..@.Pj.....j
002A60	00	6A	04	9A	00	00	00	00-83	C4	04	6A	00	6A	04	9A	.j.....j.j..
002A70	00	00	00	00	83	C4	04	6A-00	6A	05	9A	00	00	00	00	.....j.j.....
002A80	83	C4	04	6A	00	6A	05	9A-00	00	00	00	83	C4	04	8E	...j.j.....
002A90	06	04	00	26	83	3E	00	00-00	75	07	26	C7	06	00	00	...&.>...u.&....
002AA0	47	00	26	83	3E	02	00	00-75	07	26	C7	06	02	00	6D	G.&.>...u.&....m
002AB0	00	26	83	3E	04	00	00	75-07	26	C7	06	04	00	20	00	.&.>...u.&....
002AC0	26	83	3E	06	00	00	75	07-26	C7	06	06	00	26	00	26	&.>...u.&....&.&
002AD0	83	3E	08	00	00	75	07	26-C7	06	08	00	0C	00	26	B3	.>...u.&....&..
002AE0	3E	0A	00	00	75	07	26	C7-06	0A	00	08	00	6A	01	6A	>...u.&....j.j
002AF0	02	BB	00	00	BA	00	00	52-50	0E	E8	00	00	B3	C4	0B	.....RP.....
002B00	BE	06	02	00	26	C7	06	00-00	00	00	26	C7	06	02	00	....&.....&....
002B10	00	00	26	83	3E	04	00	00-75	15	8E	06	04	00	26	A1	..&.>...u.....&..

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002B20	04	00	99	2B	C2	D1	F8	8E-06	02	00	26	A3	04	00	26	...	+	.....	&....&
002B30	B3	3E	06	00	00	75	15	8E-06	04	00	26	A1	06	00	99	.	>....	u.....	&....
002B40	2B	C2	D1	F8	8E	06	02	00-26	A3	06	00	26	B3	3E	08	+	.....	&....	&....
002B50	00	00	75	15	8E	06	04	00-26	A1	04	00	99	2B	C2	D1	..	u.....	&....	+...
002B60	F8	8E	06	02	00	26	A3	08-00	26	B3	3E	0A	00	00	75	....	&....	&....	>...u
002B70	15	8E	06	04	00	26	A1	06-00	99	2B	C2	D1	F8	8E	06	....	&....	+	.....
002B80	02	00	26	A3	0A	00	1F	5E-5F	C9	CB	90	CB	00	00	00	..	&....	^_.....	
002B90	1E	B8	00	00	8E	DB	FF	76-0A	FF	76	0C	9A	00	00	00	....	v....	v....	
002BA0	00	83	C4	04	C4	5E	06	26-FF	77	0A	26	FF	77	08	26	....	^.&..w.&..w.&		
002BB0	FF	77	06	26	FF	77	04	26-FF	77	02	26	FF	37	FF	76	..w.&..w.&..w.&.7.v			
002BC0	0A	6A	01	9A	00	00	00	00-83	C4	10	1F	C9	CB	00		..j.....			
002BD0	00	00	1E	B8	00	00	8E	DB-FF	76	0A	FF	76	0C	9A	00	....	v....	v....	
002BE0	00	00	00	83	C4	04	C4	5E-06	26	FF	77	0A	26	FF	77	....	^.&..w.&..w.		
002BF0	08	26	FF	77	06	26	FF	77-04	26	FF	77	02	26	FF	37	..&..w.&..w.&..w.&.7			
002C00	FF	76	0A	6A	00	9A	00	00-00	00	B3	C4	10	1F	C9	CB	..v..j.....			
002C10	D3	9C	21	01	CE	AA	56	02-CE	83	56	1D	CA	78	9D	CE	..!	v....	v....	x...
002C20	68	56	02	CE	41	56	1D	CA-36	9D	C6	28	56	38	C6	24	hV...AV...6... (VB.#			
002C30	9C	C6	1B	56	48	C6	17	9C-C6	10	56	38	C6	0E	56	38	...VH.....VB..VB			
002C40	C6	07	9C	C5	FE	56	48	C5-FA	9C	C5	F3	56	38	C5	EE	....	VH.....	VH..	
002C50	56	38	C5	EA	9C	C5	E1	56-48	C5	DD	9C	C5	D6	56	38	VB.....VH.....VB			
002C60	C5	D1	56	38	C5	CD	9C	C5-C4	56	48	C5	C0	9C	C5	B9	..VB.....VH.....			
002C70	56	38	C5	B2	56	38	C5	AB-56	38	C5	A6	9C	85	9F	56	VB..VB..VB.....V			
002C80	59	C9	99	56	48	C5	96	56-48	C5	8D	56	48	C5	85	56	Y..VH..VH..VH..V			
002C90	48	C5	7E	56	48	C5	76	56-48	C5	6F	56	48	C5	67	56	H..VH..vVH..oVH..qV			
002CA0	48	C5	60	56	48	C5	58	56-48	C5	51	56	48	C5	49	56	H..VH..xVH..oVH..IV			
002CB0	48	C5	42	56	48	C5	3A	56-48	C5	35	9C	CD	2C	56	18	H..BVH.:VH.5...V.			
002CC0	CD	20	56	18	CD	14	56	18-CD	08	56	18	CC	FC	56	35	..V...V...V...V5			
002CD0	C4	F6	9D	C4	F2	56	04	C4-ED	9C	C4	E8	9D	C4	E4	56	....	V.....	V	
002CE0	07	C4	DF	9C	C4	DB	9D	C4-D4	56	0A	C4	CF	9C	CC	C6	....	V.....		
002CF0	56	1A	CC	BC	56	16	CC	AA-56	56	CC	9F	56	31	CC	8F	V...V...VV..V1..			
002D00	56	31	CC	7F	56	26	C4	6E-54	05	C4	69	54	05	C4	62	V1.V&.nT..iT..b			
002D10	54	05	C4	5D	54	05	C4	4E-54	05	C4	49	54	05	C4	3D	T...JT..NT..IT..=			
002D20	54	05	C4	38	9C	CC	2B	56-34	CC	1F	56	33	CC	13	56	T..B...+V4..V3..V			
002D30	4D	CB	08	9D	B7	8A	02	00-00	74							M.....t			
002D30	4D	CB	08	9D	B7	8A	02	00-00	74							M.....t			

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000000	80	0B	00	09	62	6B	72	6D-5F	39	37	2E	63	60	d8	07	....bkrm_97.c'..
000010	00	00	00	4D	53	20	43	6E-88	09	00	00	9F	4C	4C	49	...MS Cn.....LLI
000020	42	43	45	25	88	06	00	00-9D	32	6C	4F	E8	88	06	00	BCE%.....210....
000030	00	A1	01	43	56	37	96	35-00	00	06	44	47	52	4F	55	...CV7.5...DGRDU
000040	50	0C	42	48	52	4D	5F	39-37	5F	54	45	58	54	04	43	P.BKRM_97_TEXT.C
000050	4F	44	45	05	5F	44	41	54-41	04	44	41	54	41	05	43	ODE._DATA.DATA.C
000060	4F	4E	53	54	04	5F	42	53-53	03	42	53	53	36	98	07	ONST._BSS.BSS6..
000070	00	48	36	0B	03	04	01	D0-98	07	00	48	96	01	05	06	.H6.....H....
000080	01	76	98	07	00	48	26	00-07	07	01	E4	98	07	00	48	.v...H&.....H
000090	00	00	08	09	01	07	9A	08-00	02	FF	03	FF	04	FF	02	.....
0000A0	56	9C	0D	00	00	03	01	02-02	01	03	04	40	01	45	01	V.....@.E.
0000B0	00	8C	23	02	09	5F	5F	66-6C	74	75	73	65	64	00	06	..#...ftrused..
0000C0	46	4A	53	52	51	51	00	06-46	49	53	52	51	51	00	06	FJSRQ0..FISRQ0..
0000D0	46	49	45	52	51	51	00	06-46	49	44	52	51	51	00	06	FIERQ0..FIDRQ0..
0000E0	46	49	57	52	51	51	00	0A-5F	5F	61	63	72	74	75	73	FIWRQ0..__acrtus
0000F0	65	64	00	07	5F	73	63	72-6F	6C	6C	00	13	5F	67	65	ed.._scroll..._ge
000100	74	5F	65	78	70	65	72	69-6D	65	6E	74	5F	6B	65	79	r_experiment_key
000110	00	0C	5F	69	6D	5F	73	6F-66	74	67	6E	67	74	00	0B	.._im_softinit..
000120	5F	69	6D	5F	61	76	65	72-61	67	65	00	08	5F	69	6D	_im_average..._im
000130	5F	73	79	6E	63	00	06	5F-66	72	61	6D	65	00	0E	5F	_sync..._frame...
000140	63	6C	69	70	5F	73	75	62-74	72	61	63	74	00	11	5F	clip_subtract...
000150	72	65	6D	6F	76	65	5F	62-61	72	5F	67	72	61	70	68	remove_bar_graph
000160	00	07	5F	65	72	72	6D	73-67	00	0B	5F	62	6B	72	6D	.._errmsg..._bkrm
000170	5F	39	37	00	09	5F	69	6D-5F	76	69	64	65	6F	00	0B	_97..._im_video..
000180	5F	69	6D	5F	6F	75	74	6D-6F	64	65	00	13	5F	63	6C	_im_outmode..._cl
000190	65	61	72	5F	6D	65	73	73-61	67	65	5F	61	72	65	61	ear_message_area
0001A0	00	0B	5F	69	6D	5F	6F	75-74	70	61	74	68	00	0A	5F	.._im_outpath...
0001B0	69	6D	5F	6F	70	6D	6F	64-65	00	15	5F	63	6C	6F	73	_im_omode..._clos
0001C0	65	5F	73	74	61	6E	64	61-72	64	73	5F	66	69	6C	65	e_standards_file
0001D0	00	0A	5F	69	6D	5F	63	70-75	77	69	6E	00	0E	5F	67	.._im_cpuwin..._g
0001E0	65	74	5F	73	74	61	6E	64-61	72	64	73	00	0B	5F	6D	et_standards..._m
0001F0	65	73	73	61	67	65	5F	6F-6E	00	0C	5F	64	72	61	77	essage_on..._draw
000200	5F	62	6F	72	64	65	72	00-09	5F	78	62	6B	72	6D	5F	_border..._xbkrm_
000210	39	37	00	0C	5F	73	65	74-5F	6D	65	73	73	61	67	65	97..._set_message
000220	00	0E	5F	69	6D	5F	69	6E-74	65	72	69	6D	61	67	65	.._im_interimage
000230	00	11	5F	73	65	74	5F	73-63	72	65	65	6E	5F	74	69	.._set_screen_ti
000240	74	6C	65	00	06	5F	5F	66-74	6F	6C	00	05	5F	7A	65	tle..._ftol..._ze
000250	72	6F	00	04	5F	6F	6E	65-00	04	5F	74	77	6F	00	06	ro..._one..._two..
000260	5F	74	68	72	65	65	00	0C-5F	6D	65	73	73	61	67	65	_three..._message
000270	5F	6F	66	66	00	04	5F	61-6C	6C	00	08	5F	73	70	72	_off..._all..._spr
000280	69	6E	74	66	00	0F	5F	64-72	61	77	5F	62	61	72	5F	intf..._draw_bar_
000290	67	72	61	70	68	00	05	5F-63	68	61	6E	00	08	5F	67	graph..._chan..._g
0002A0	72	5F	63	68	61	6E	00	0F-5F	73	65	74	5F	62	61	72	r_chan..._set_bar
0002B0	5F	73	6C	69	64	65	72	00-1C	5F	67	65	74	5F	73	74	_slider..._get_st
0002C0	61	6E	64	61	72	64	5F	67-72	69	64	5F	73	74	72	75	andard_grid_stru
0002D0	63	74	75	72	65	00	55	90-2E	00	00	01	0E	5F	63	6C	cture.U....._cl

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0002E0	69 70 5F 73 75 62 74 72-61 63 74 00 00 00-08 5F	ip_subtract...._
0002F0	62 6B 72 6D 5F 39 37 16-0B 00 09 5F 78 62 6B 72	bkrm_97...._xbkr
000300	6D 5F 39 37 DE 00 00 29-8B 04 00 00 A2 01 D1 A0	m_97....).....
000310	53 01 02 07 00 42 69 6F-6C 6F 67 69 63 61 6C 20	S....Biological
000320	56 69 73 69 6F 6E 20 20-42 4B 52 4D 5F 39 37 20	Vision BKRm_97
000330	42 61 63 6B 67 72 6F 75-6E 64 20 52 65 6D 6F 76	Background Remov
000340	61 6C 00 43 61 6E 27 74-20 61 63 63 65 73 73 20	al.Can't access
000350	73 74 61 6E 64 61 72 64-73 20 69 6E 66 6F 72 6D	standards inform
000360	61 74 69 6F 6E 20 66 6F-72 20 6B 65 79 20 25 6C	ation for key %l
000370	64 00 55 73 69 6E 57 20-64 65 66 61 75 6C 74 20	d.Using default
000380	67 72 69 64 20 73 74 72-75 63 74 75 72 65 20 64	grid structure d
000390	61 74 61 00 55 73 69 6E-67 20 64 65 66 61 75 6C	ata.Using default
0003A0	74 20 67 72 69 64 20 73-74 72 75 63 74 75 72 65	t grid structure
0003B0	20 64 61 74 61 00 53 65-74 74 69 6E 67 20 75 70	data.Setting up
0003C0	20 66 6F 72 20 62 61 63-6B 67 72 6F 75 6E 64 20	for background
0003D0	72 65 6D 6F 76 61 6C 2E-2E 2E 00 52 61 64 69 75	removal....Radiu
0003E0	73 20 3D 20 25 64 20 58-69 6E 63 72 65 6D 65 6E	s = %d Xincremen
0003F0	74 20 3D 20 25 64 20 59-69 6E 63 72 65 6D 65 6E	t = %d Yincremen
000400	74 20 3D 20 25 64 00 52-65 6D 6F 76 69 6E 67 20	t = %d.Removing
000410	62 61 63 6B 67 72 6F 75-6E 64 2E 2E 2E 00 42 61	background....Ba
000420	63 6B 67 72 6F 75 6E 64-20 72 65 6D 6F 76 61 6C	ckground removal
000430	20 70 65 72 63 65 6E 74-20 63 6F 6D 70 6C 65 74	percent complet
000440	65 00 43 6C 65 61 6E 69-6E 67 20 75 70 20 62 61	e.Cleaning up ba
000450	63 6B 67 72 6F 75 6E 64-20 72 65 6D 6F 76 61 6C	ckground removal
000460	2E 2E 2E 00 49 A0 07 00-02 00 00 64 00 32 D1 A0	....1.....d.2..
000470	07 00 02 04 00 96 B4 C8-41 A0 44 00 02 56 01 43	.....A.D..V.C
000480	6F 70 79 72 69 67 68 74-20 28 63 29 20 31 39 38	opyright (c) 198
000490	39 2C 20 42 69 6F 6C 6F-67 69 63 61 6C 20 56 69	9, Biological Vi
0004A0	73 69 6F 6E 20 49 6E 63-2E 20 20 41 6C 6C 20 72	sion Inc. All r
0004B0	69 67 6B 74 73 20 72 65-73 65 72 76 65 64 00 70	ights reserved.p
0004C0	A0 06 00 03 00 00 00 00-57 9C 05 00 C8 00 56 22	.....W.....V"
0004D0	1F A0 E2 00 01 00 00 C8-1B 00 00 57 56 1E B8 00	.....WV...
0004E0	00 8E D8 8E 06 00 00 26-FF 36 00 00 6A 01 9A 00	.....&.6..j...
0004F0	00 00 00 83 C4 04 6A 01-9A 00 00 00 00 83 C4 02	.....j.....
000500	6A 00 6A 00 6A FF 6A 01-9A 00 00 00 00 83 C4 08	j.j.j.j.....
000510	6A 00 6A 00 6A FF 6A 01-9A 00 00 00 00 83 C4 08	j.j.j.j.....
000520	C7 46 FA 00 D0 6A 01 9A-00 00 00 00 83 C4 02 6A	.F...j.....j
000530	04 6A 00 9A 00 00 00 00-83 C4 04 2B F6 89 76 EB	.j.....+...v.
000540	8B C6 C1 F8 06 89 46 EE-50 9A 00 00 00 00 83 C4	.....F.F.....
000550	02 8B 46 EB 89 46 F8 8B-56 FA 40 89 46 F2 89 56	..F..F..V.@.F..V
000560	F4 BF 00 02 89 7E EA C4-5E F8 26 8A 07 2A E4 89	.....~...^.&...*
000570	46 FC C4 5E F2 26 8A 07-89 46 F6 2B 46 FC 8B C8	F...^.&...F.+F...
000580	0B C9 7D 02 2B C9 8B C1-26 8B 07 83 46 F8 02 83	...?..+...&...F...
000590	46 F2 02 FF 4E EA 75 CF-89 4E F0 80 46 E9 04 46	F...N.u...N..F..F
0005A0	81 FE DF 01 7E 9A 6A 00-9A 00 00 00 00 83 C4 02	.....~.j.....
0005B0	1F 5E 5F C9 CB 09 9C 2B-00 CC D2 56 13 CC 73 56	..^_.....+...V...sv

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0005C0	18	CC	5D	56	16	CC	51	56-13	CC	42	56	15	CC	32	56	..JV..QV..BV..2V
0005D0	15	CC	22	56	13	CC	18	56-12	C4	13	56	22	C4	0E	9C	..V...V...V"...
0005E0	C8	08	9D	BB	A0	28	00	03-02	00	00	00	00	00	00	00	.....(.....
0005F0	00	00	00	00	00	00	00	40-00	00	00	00	00	00	00	E0	3F
000600	00	00	00	00	00	00	08	40-00	00	00	00	00	00	00	8C	9C
000610	19	00	C8	22	56	24	C8	20-56	26	C8	1E	56	23	C8	04	..."V#. V&..V#..
000620	56	2A	C8	02	56	29	C8	00-56	21	50	A0	B7	03	01	DE	V*..V)..V!F.....
000630	00	C8	AE	27	00	57	56	1E-B8	00	00	BE	D8	8E	06	02	...WV.....
000640	00	26	A1	00	00	8E	06	04-00	26	A3	00	00	8E	06	00	.&.....&.....
000650	00	26	A1	00	00	8E	06	06-00	26	A3	00	00	1E	68	07	.&.....&.....h.
000660	00	9A	00	00	00	00	83	C4-04	58	00	03	68	00	D0	9A	.....h.....h...
000670	00	00	00	00	83	C4	04	BE-06	04	00	26	FF	36	00	00	.....&.....&...
000680	6A	02	9A	00	00	00	00	83-C4	04	8E	06	00	00	26	FF	j.....&.....
000690	36	00	00	6A	00	9A	00	00-00	00	83	C4	04	8E	06	04	6...j.....
0006A0	00	26	FF	36	00	00	8E	06-00	00	26	FF	36	00	00	9A	.&.....&.....&...
0006B0	00	00	00	00	83	C4	04	83-7E	0A	00	74	03	E9	B5	01	.....t.....
0006C0	9A	00	00	00	00	89	86	70-D8	89	96	72	D8	0B	D2	7D	.....p.....r...)
0006D0	0A	2B	C0	89	86	72	D8	89-86	70	D8	FF	B6	72	D8	FF	.+...r...p...r...
0006E0	86	70	D8	9A	00	00	00	00-83	C4	04	89	86	7A	D8	89	.p.....z...
0006F0	96	7C	D8	0B	D0	75	1C	FF-B6	72	D8	FF	B6	70	D8	1E	.i...u...r...p...
000700	68	35	00	9A	00	00	00	00-83	C4	08	2B	C0	1F	5E	5F	h5.....+.....
000710	C9	CE	90	8D	46	FA	16	50-8D	86	92	D8	16	50	8D	86	....F...F...F...
000720	5E	D8	16	50	8D	86	68	D8-16	50	8D	86	86	D8	16	50	...P...h...P...P
000730	ED	86	90	D8	16	50	8D	86-84	D8	16	50	8D	86	8E	D8	.....P...P...P...
000740	16	50	8D	86	6E	D8	16	50-8D	86	78	D8	16	50	9A	00	.P...n...P...x...P...
000750	00	00	00	83	C4	28	0B	C0-75	1D	8B	86	7A	D8	0B	86	.....(..u...z...
000760	7C	D8	74	A7	FF	B6	7C	D8-FF	B6	7A	D8	9A	00	00	00	.t...t...z.....
000770	00	83	C4	04	EB	95	90	83-BE	78	D8	00	75	47	83	BE	.....x...uG...
000780	6E	D8	00	75	40	83	BE	BE-D8	00	75	39	83	BE	84	D8	n...u@.....u9....
000790	00	75	32	1E	68	64	00	6A-00	9A	00	00	00	00	83	C4	.u2.hd.j.....
0007A0	06	C7	86	78	D8	05	00	C7-86	6E	D8	05	00	C7	86	BE	...x.....n.....
0007B0	D8	2B	00	C7	86	84	D8	3C-00	C7	86	90	D8	0C	00	C7	.+.....<.....
0007C0	86	86	D8	0B	00	FF	B6	7C-D8	FF	B6	7A	D8	9A	00	00	.....i...z.....
0007D0	00	00	83	C4	04	83	BE	BE-D8	00	75	06	C7	86	8E	D8	.....u.....
0007E0	08	00	83	BE	84	D8	00	75-06	C7	86	84	D8	0A	00	83	.....u.....
0007F0	BE	90	D8	00	75	06	C7	86-90	D8	0C	00	83	BE	86	D8	.....u.....
000800	00	75	06	C7	86	86	D8	08-00	83	BE	92	D8	00	75	13	.u.....u.....
000810	83	7E	FA	00	75	0D	9B	DF-86	8E	D8	9B	DF	86	84	D8	.~.u.....
000820	EB	0A	90	9B	DF	86	92	D8-9B	DF	46	FA	9B	DE	C1	9B	.....F.....
000830	DC	36	0B	00	9B	D9	96	60-D8	9B	DC	06	10	00	9B	DC	.6.....
000840	0E	18	00	9A	00	00	00	00-89	86	88	D8	3D	31	00	7E	.....=1~
000850	06	C7	86	88	D8	31	00	8B-86	88	D8	99	B9	04	00	F7	.....1.....
000860	F9	89	86	E8	D8	8B	86	88-D8	99	B9	03	00	F7	F9	89	.....
000870	86	E6	D8	EB	54	8B	46	0A-89	86	88	D8	8B	46	0C	89	....T.F.....F..
000880	86	EB	D8	8B	46	0E	89	86-E6	D8	83	BE	88	D8	31	7E	....F.....1~
000890	06	C7	86	88	D8	31	00	1E-68	86	00	6A	00	9A	00	00	.....1..h..j....

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0008A0	00 00 B3 C4 06 C7 86 78-D8	05 00 C7 86 6E D8 05	.....x.....n..
0008B0	00 C7 86 8E D8 2B 00 C7-86	84 D8 3C 00 C7 86 90	.....+.....<....
0008C0	D8 0C 00 C7 86 86 D8 08-00	1E 68 A8 00 9A 00 00	.....h.....
0008D0	00 00 B3 C4 04 8E 06 02-00	8B 86 E6 D8 26 39 06	.....&9.
0008E0	00 00 75 08 8B 86 E8 D8-89	86 E6 D8 8B 86 88 D8	...u.....
0008F0	8E 06 00 00 26 2B 06 00-00	89 86 64 D8 8B 86 88	....&+.....d....
000900	D8 99 8E 06 20 00 26 F7-3E	00 00 26 A1 00 00 8B	....&.>...&....
000910	CA F7 AE 88 D8 2B C1 89-86	6A D8 8B 86 88 D8 99	.....+.....j.....
000920	26 F7 3E 00 00 89 46 FC-03	86 88 D8 89 46 FE FF	&.>...F.....F..
000930	B6 E6 D8 FF B6 E8 D8 FF-B6	88 D8 1E 68 CD 00 8D	.....h....
000940	86 96 D8 16 50 9A 00 00-00	00 83 C4 0E 8D 86 96	....F.....
000950	D8 16 50 6A 00 9A 00 00-00	00 83 C4 06 8B 86 7B	..Fj.....x
000960	D8 B9 86 82 D8 8B 86 6E-D8	89 86 74 D8 8B 86 90	.....n...t....
000970	D8 F7 AE 8E D8 03 86 78-D8	89 86 76 D8 8B 86 86	.....x...v....
000980	D8 F7 AE 84 D8 03 86 6E-D8	89 86 6C D8 8E 06 20	.....n...l....
000990	00 8B 46 08 26 39 06 00-00	75 0A 8E 06 22 00 26	..F.&7...u...".&
0009A0	A1 00 00 EB 08 8E 06 02-00	26 A1 00 00 89 86 94	.....&.....
0009B0	D8 FF B6 6C D8 FF B6 76-D8	FF B6 74 D8 FF B6 82	...l...v...t....
0009C0	D8 50 FF 76 06 9A 00 00-00	00 83 C4 0C 8E 06 04	.F.v.....
0009D0	00 26 FF 36 00 00 6A 02-9A	00 00 00 00 83 C4 04	.&.e...j.....
0009E0	8E 06 04 00 49 9C 03 01-C7	B1 9C CF A8 56 16 C7	....l.....V..
0009F0	A3 56 29 C7 9E 9C CF 95-56	1B C7 7A 56 21 C7 76	.V).....V...zV!..v
000AA0	9C C7 70 56 26 C7 6C 9C-C7	66 56 23 C7 5E 9C CF	..pV&.l...fV#..<..
000A10	25 56 1D CF 15 56 27 C7-0C	9D C6 F2 56 23 C6 DC	%V...V'.....V#..
000A20	56 23 C6 D8 56 23 C6 D3-9C	C6 C6 56 22 C6 C1 9C	V#..V#.....V"...
000A30	C6 AF 56 21 C6 A6 9C CE-9D	56 1A C6 9A 9D CE 6D	..V!.....V.....m
000A40	56 1D C6 68 9D CE 13 56-20	C6 10 9C C6 0D 56 05	V..h...V.....V.
000A50	C6 0B 9C C6 08 56 05 C6-03	56 05 C6 01 9C C5 FE	.....V...V.....
000A60	56 05 C5 FB 56 05 C5 F7-56	05 C5 F2 56 05 C5 EA	V...V...V...V...
000A70	56 05 C5 E3 56 05 CD 9D-56	17 CD 69 56 1D C5 64	V...V...V...iV..d
000A80	9D CD 3C 56 17 CD 1E 56-2C	CC D3 56 10 C4 D0 9D	..<V...V...V....
000A90	CC B3 56 19 CC 90 56 09-CC	7F 56 0C C4 7C 56 22	..V...V...V...iV"
000AA0	C4 77 9C C4 73 56 29 C4-6E	9C CC 65 56 12 C4 60	.w...sV).n...eV...)
000AB0	56 22 C4 5B 9C CC 52 56-16	C4 4D 56 29 C4 48 9C	V".[...RV...MV).H.
000AC0	CC 3F 56 0A CC 31 56 1F-C4	2E 9D C4 2A 56 2A C4	.?V...iV.....*V*.
000AD0	26 9C C4 22 56 22 C4 1E-9C	C4 1A 56 29 C4 16 9C	&..."V".....V)...
000AE0	C4 12 56 21 C4 0E 9C CB-08	9D BE A0 B4 03 01 91	..V!.....
000AF0	04 26 FF 36 00 00 6A 02-9A	00 00 00 00 83 C4 04	.&.6...j.....
000B00	6A 01 9A 00 00 00 00 83-C4	02 6A 08 8E 06 02 00	j.....j.....
000B10	26 FF 36 00 00 FF 76 06-FF	76 06 9A 00 00 00 00	&.6...v...v.....
000B20	83 C4 08 6A 08 8E 06 02-00	26 FF 36 00 00 FF 76	...j.....&.6...v
000B30	06 FF 76 06 9A 00 00 00-00	83 C4 08 6A 01 9A 00	..v.....j....
000B40	00 00 00 83 C4 02 6A 08-8E	06 24 00 26 FF 36 00	.....j...\$.&.6..
000B50	00 8E 06 02 00 26 FF 36-00	00 26 FF 36 00 00 9A	.....&.6..&.6...
000B60	00 00 00 00 83 C4 08 6A-08	8E 06 24 00 26 FF 36	.....j...\$.&.6..
000B70	00 00 8E 06 02 00 26 FF-36	00 00 26 FF 36 00 00	.....&.6..&.6...

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000B80	9A 00 00 00 00 83 C4 08-8E 06 02 00 26 A1-00 00	.....&...
000B90	89 86 8C D8 3D 63 00 7F-54 6B C0 64 8B F8 B8 64	....=c.Tk.d...d
000BA0	00 2B 86 8C D8 89 86 56-D8 01 86 8C D8 BE 06 02	+.....V.....
000BB0	00 26 8B 36 00 00 83 FE-63 7F 25 B8 64 00 2B C6	..&.6....c%.d.+.
000BC0	89 86 58 D8 8B DF 03 DE-03 DD 26 A0 00 00 8B 8E	..X.....&.....
000BD0	58 D8 57 8D BF EA D8 16-07 F2 AA 5F 03 B6 58 D8	X.W.....X.
000BE0	83 C7 64 81 FF AC 26 7E-C4 89 B6 66 D8 8B 46 FC	..d...&~...f..F.
000BF0	89 86 8C D8 8B 46 FE 39-86 8C D8 7D 5C 6B 46 FC	.....F.9...3\kF.
000C00	64 89 86 56 D8 8B 46 FE-2B 46 FC 89 86 5A D8 01	e..V..F.+F...Z..
000C10	86 8C D8 8B BE 58 D8 2E-06 02 00 26 8B 36 00 00	.....&.6...
000C20	38 B6 6A D8 7D 24 8B BE-6A D8 2B FE 8B 9E 56 D8	:.j.3%.j.+.V.
000C30	03 DE 03 DD 06 06 00 00-26 A0 00 00 8B CF 57 8D	.....&.....W.
000C40	BF EA D8 16 07 F2 AA 5F-03 F7 83 86 56 D8 64 FF	.....V.d.
000C50	8E 5A D8 75 02 89 86 56-D8 8B 86 6A D8 8E 06 00	.Z.u...f...j....
000C60	00 26 2B 06 00 00 89 86-8A D8 26 A1 00 00 03 46	..&+.....&.....F
000C70	FC 89 86 7E D8 8E 06 02-00 26 A1 00 00 89 86 80	...~.....&.....
000C80	D8 8B 46 FC 39 66 80 D8-7D 7D 6B 86 80 D8 64 89	..F.9...33k...d.
000C90	86 56 D8 6B 86 8A D8 64-89 86 58 D8 8B 46 FC 2B	.V.k...d...&..F.+
000CA0	86 80 D8 89 86 5A D8 01-86 80 D8 F7 D8 01 86 8A	.....Z.....
000CB0	D8 8B 76 FE 8B 8E 7E D8-8E 06 00 00 26 2B 0E 00	..v...~.....&+..
000CC0	00 3B CE 7D 26 26 8B 3E-00 00 8B 9E 56 D8 03 D9	..:3&&~.....V...
000CD0	03 DD 8B C7 36 8B 87 EA-D8 8B 9E 58 D8 03 D9 03	.....6.....X.....
000CE0	DD 36 8B 87 EA D8 41 3B-CE 7C DF 83 AE 58 D8 64	.6....A:j...i...X.d
000CF0	FF 8E 7E D8 46 83 86 56-D8 64 FF 8E 5A D8 75 B4	..~.F..V.d..Z.u.
000D00	89 76 FE 89 8E 66 D8 9A-00 00 00 00 1E 68 F9 00	.v...f.....h...
000D10	6A 01 9A 00 00 00 00 83-C4 06 1E 68 10 01 6A 05	j.....h...j.
000D20	6A 0A 9A 00 00 00 00 83-C4 08 8E 06 02 00 26 A1	j.....&.....
000D30	00 00 89 86 8A D8 8B 86-6A D8 39 86 8A D8 7C 03	.....j.9...i.
000D40	E9 67 01 8B 86 64 D8 F7-D8 89 86 54 D8 6B 86 8A	.9....d....T.k..
000D50	D8 64 89 86 5A D8 6B 86-E8 D8 64 89 86 52 D8 6A	.d..Z.k...d..R.j
000D60	00 FF B6 6A D8 FF B6 8A-D8 9A 00 00 00 00 83 C4	...j.....
000D70	06 8E 06 02 00 26 8B 36-00 00 3B B6 6A D8 7C 03	.....&.6...;j.i.
000D80	E9 06 01 8B 86 54 D8 89-86 56 D8 8B 86 64 D8 2B	.....T...V...d.+
000D90	86 8A D8 89 86 58 D8 8B-7E 08 8B 9E 5A D8 03 DE	.....X...~...Z...
000DA0	03 DD 36 80 BF EA D8 00-75 03 E9 CF 00 8B 86 5B	..6.....u.....X
000DB0	D8 89 86 66 D8 8B 86 56-D8 03 C6 89 86 8C D8 50	...f...V.....F
000DC0	FF B6 66 D8 8E 06 00 00-26 FF 36 00 00 8E 06 24	..f.....&.6....\$
000DD0	00 26 FF 36 00 00 9A 00-00 00 00 83 C4 08 6A 01	..&.6.....j.
000DE0	9A 00 00 00 00 83 C4 02-57 BE 06 20 00 26 FF 36	.....W...&.6
000DF0	00 00 8E 06 00 00 26 FF-36 00 00 8E 06 02 00 26	.....&.6.....&
000E00	FF 36 00 00 9A 00 00 00-00 83 C4 08 57 BE 06 20	.6.....W...
000E10	00 26 FF 36 00 00 8E 06-00 00 26 FF 36 00 00 8E	..&.6.....&.6...
000E20	06 02 00 26 FF 36 00 00-9A 00 00 00 83 C4 08	...&.6.....
000E30	6A 01 9A 00 00 00 00 83-C4 02 6A 08 8E 06 04 00	j.....j.....
000E40	26 FF 36 00 00 8E 06 20-00 26 FF 36 00 00 26 FF	&.6....&.6...&.
000E50	36 00 00 9A 00 00 00 00-83 C4 08 6A 08 8E 06 04	6.....j.....

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000E60	00	26	FF	36	00	00	BE	06-20	00	26	FF	36	00	26	.&.6....&.6..&
000E70	FF	36	00	00	9A	00	00	00-00	83	C4	08	03	B6	E6	.6.....
000E80	39	B6	6A	D8	7E	03	E9	11-FF	8B	B6	52	D8	01	B6	9.j.~.....R...Z
000E90	D8	8B	86	E8	D8	01	86	8A-D8	8B	86	6A	D8	39	B6	.....j.9..
000EA0	D8	1C	9C	2C	01	CF	84	56-1E	C7	81	56	23	C7	7C	....,....V...V#.!V
000EB0	23	C7	77	9C	C7	73	56	29-C7	6E	9C	CF	63	56	1E	#.w...sV).n..cV..
000EC0	60	56	23	C7	5B	56	23	C7-56	9C	C7	52	56	29	C7	'V#.[V#.V..RV).M
000ED0	9C	CF	42	56	13	CF	38	56-1E	C7	35	56	21	C7	30	..BV..BV..5V!.0.
000EE0	C7	2C	56	22	C7	27	9C	C7-23	56	23	C7	1E	9C	CF	..V"...#V#.....
000EF0	56	1E	C7	11	56	21	C7	0C-9C	C7	08	56	22	C7	03	V...V!.....V"...
000F00	C6	FF	56	23	C6	FA	9C	CE-F0	56	13	CE	E6	56	08	..V#.....V...V..
000F10	E3	56	24	C6	DE	9C	C6	DA-56	22	C6	D5	9C	C6	87	.V\$.....V".....V
000F20	21	C6	82	9C	CE	79	56	2B-C6	3F	56	21	C6	3B	9C	!....yV+.?V!;..
000F30	32	56	28	C6	2B	9C	CE	22-56	1D	C6	1D	9C	CE	17	2V(+.. "V.....V
000F40	25	C5	D7	56	22	C5	CE	56-22	C5	C9	9C	C5	8A	56	%..V"...V".....V!
000F50	C5	86	9C	C5	7B	56	22	C5-73	56	22	C5	6E	9C	C5	....(V"..sV".n...I
000F60	56	22	C5	45	9C	C5	2D	56-21	C5	28	9C	C4	DB	56	V".E...-V!.(...V!
000F70	C4	C3	56	21	C4	BE	9C	C4-9D	56	21	C4	9F	9C	CC	..V!.....V!.....
000F80	56	1E	C4	8D	56	21	C4	8B-56	21	C4	83	9C	C4	7F	V...V!...V!...V
000F90	24	C4	7A	9C	CC	6F	56	1E-C4	6C	56	21	C4	67	56	\$..z...oV...!V!.qV!
000FA0	C4	62	9C	C4	5E	56	24	C4-59	9C	CC	4E	56	13	CC	.b...^V#.Y...NV...D
000FB0	56	1E	C4	3B	56	21	C4	36-9C	CC	2B	56	1E	C4	22	V...;V!.6...+V... "V
000FC0	21	C4	1D	9C	CC	12	56	13-CC	08	56	16	C4	03	56	!....V...V...V)
000FD0	63	A0	7F	02	01	41	08	7D-03	E9	B9	FE	89	B6	7E	c....A.j.....^.
000FE0	6A	00	FF	B6	6A	D8	FF	B6-6A	DB	9A	00	00	00	83	j...j...j.....
000FF0	C4	06	1E	68	34	01	6A	01-9A	00	00	00	00	83	C4	...h4.j.....
001000	6A	00	BE	06	06	00	26	FF-36	00	00	6A	FF	8E	06	j.....&.6..j....
001010	00	26	FF	36	00	00	9A	00-00	00	00	83	C4	08	6A	.&.6.....j...
001020	8E	06	06	00	26	FF	36	00-00	6A	FF	8E	06	04	00	....&.6..j.....&
001030	FF	36	00	00	9A	00	00	00-00	83	C4	08	6A	01	9A	.6.....j....
001040	00	00	00	83	C4	02	6A	0B-BE	06	00	00	26	FF	36	.....j.....&.6.
001050	00	BE	06	24	00	26	FF	36-00	00	26	FF	36	00	00	...\$.&.6..&.6...
001060	00	00	00	00	83	C4	08	6A-0B	8E	06	00	00	26	FF	.....j.....&.6
001070	00	00	BE	06	24	00	26	FF-36	00	00	26	FF	36	00	....\$.&.6..&.6..
001080	9A	00	00	00	00	83	C4	0B-6A	01	9A	00	00	00	00	.....j.....
001090	C4	02	C7	86	7E	DB	05	00-BE	05	00	6A	05	6A	00	.....~.....j.j..
0010A0	00	00	00	00	83	C4	04	6A-0B	8E	06	02	00	26	FF	.....j.....&.6
0010B0	00	00	BE	06	20	00	26	FF-36	00	00	26	FF	36	00	....&.6..&.6..
0010C0	9A	00	00	00	00	83	C4	0B-6A	0B	8E	06	02	00	26	.....j.....&
0010D0	36	00	00	BE	06	20	00	26-FF	36	00	00	26	FF	36	6....&.6..&.6.
0010E0	00	9A	00	00	00	00	83	C4-0B	4E	75	AF	6A	0B	BE	.....Nu.j...
0010F0	20	00	26	FF	36	00	00	BE-06	00	00	26	FF	36	00	.&.6.....&.6..
001100	26	FF	36	00	00	9A	00	00-00	00	83	C4	0B	6A	0B	&.6.....j...
001110	06	20	00	26	FF	36	00	00-BE	06	00	00	26	FF	36	.&.6.....&.6.
001120	00	26	FF	36	00	00	9A	00-00	00	00	83	C4	0B	68	.&.6.....h.
001130	00	6A	00	9A	00	00	00	00-83	C4	04	68	FF	00	6A	.j.....h..j.

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001140	9A 00 00 00 00 00 B3 C4 04-0E E8 00 00 6A 08-8E 06	.....j...
001150	24 00 26 FF 36 00 00 8E-06 02 00 26 FF 36 00 00	\$.&.6.....&.6..
001160	26 FF 36 00 00 9A 00 00-00 00 B3 C4 08 6A 08 BE	&.6.....j..
001170	06 24 00 26 FF 36 00 00-BE 06 02 00 26 FF 36 00	.\$.&.6.....&.6.
001180	00 26 FF 36 00 00 9A 00-00 00 00 B3 C4 08 6A 08	.&.6.....j.
001190	8E 06 02 00 26 FF 36 00-00 8E 06 00 00 26 FF 36	....&.6.....&.6
0011A0	00 00 26 FF 36 00 00 9A-00 00 00 00 B3 C4 08 6A	...&.6.....j
0011B0	08 8E 06 02 00 26 FF 36-00 00 8E 06 00 00 26 FF	.....&.6.....&.
0011C0	36 00 00 26 FF 36 00 00-9A 00 00 00 00 B3 C4 08	6...&.6.....
0011D0	6A 08 8E 06 00 00 26 FF-36 00 00 8E 06 20 00 26	j.....&.6.....&
0011E0	FF 36 00 00 26 FF 36 00-00 9A 00 00 00 00 B3 C4	.6...&.6.....
0011F0	08 6A 08 8E 06 00 00 26-FF 36 00 00 8E 06 20 00	.j.....&.6.....
001200	26 FF 36 00 00 26 FF 36-00 00 9A 00 00 00 00 B3	&.6...&.6.....
001210	C4 08 8E 06 20 00 8B 46-08 26 39 06 00 00 75 0C	....F.&9...u.
001220	8E 06 02 00 26 A1 00 00-EB 0A 90 90 8E 06 22 00	....&....."
001230	26 A1 00 00 89 86 94 D8-FF B6 6C D8 FF B6 76 D8	&.....l...v.
001240	FF B6 74 D8 FF B6 82 D8-50 8E 06 20 00 26 FF 36	..t.....P...&.6
001250	00 00 1E 9C 6C 01 C6 79-56 23 C6 74 9C C6 5B 56	....l...yV#.t...IV
001260	26 C6 57 9C C6 4F 56 21-C6 4B 9C C6 4B 56 23 C6	&.W...OV!.K...EV#.
001270	3D 9C CE 34 56 1E C6 31-56 23 C6 2C 56 23 C6 27	=...4V...IV#...V#.
001280	9C C6 23 56 22 C6 1E 9C-CE 13 56 1E C6 10 56 23	..#V"....V...V#
001290	C6 0B 56 23 C6 06 9C C6-02 56 22 C5 FD 9C CD F2	..V#....V".....
0012A0	56 1E C5 EF 56 22 C5 EA-56 22 C5 E5 9C C5 E1 56	V...V"...V"....V
0012B0	21 C5 DC 9C CD D1 56 1E-C5 CE 56 22 C5 C9 56 22	!.....V...V"...V"
0012C0	C5 C4 9C C5 C0 56 21 C5-BB 9C CD B0 56 1E C5 AD	.....V!.....V...
0012D0	56 21 C5 AB 56 21 C5 A3-9C C5 9F 56 24 C5 9A 9C	V!...V!.....V#...
0012E0	CD 8F 56 1E C5 8C 56 21-C5 87 56 21 C5 82 9C C5	..V...V!...V!....
0012F0	7E 56 24 C5 79 9C 85 73-56 0E CD 6A 56 0D CD 5D	~V#.y...sV...jV...J
001300	56 0D CD 50 56 1E C5 4D-56 22 C5 4B 56 22 C5 43	V...PV...MV"...HV".C
001310	9C C5 3F 56 23 C5 3A 9C-CD 2F 56 1E C5 2C 56 22	..?V#...:/V...V"
001320	C5 27 56 22 C5 22 9C C5-1E 56 23 C5 19 9C CD 0B	..V"...V#.....
001330	56 1E C5 0B 56 23 C5 03-56 23 C4 FE 9C C4 FA 56	V...V#...V#....V
001340	21 C4 F5 9C CC EA 56 1E-C4 E7 56 23 C4 E2 56 23	!.....V...V#...V#
001350	C4 DD 9C C4 D9 56 21 C4-D4 9C CC C9 56 0B CC B4	.....V!.....V...
001360	56 13 CC AA 56 1E C4 A7-56 24 C4 A2 56 24 C4 9D	V...V...V#...V#..
001370	9C C4 99 56 22 C4 94 9C-CC 89 56 1E C4 86 56 24	...V"....V...V#
001380	C4 81 56 24 C4 7C 9C C4-7B 56 22 C4 73 9C CC 6B	..V#.!.xV"...s..h
001390	56 13 CC 5E 56 15 C4 5B-56 29 C4 56 9C C4 50 56	V...^V...[V).V..PV
0013A0	2A C4 4B 9C CC 40 56 15-C4 3D 56 29 C4 3B 9C C4	*.K...@V...=V).B..
0013B0	32 56 2A C4 2D 9C CC 22-56 1D C4 1D 9D CC 14 56	2V*...-"V.....V
0013C0	2B 56 A0 7E 00 01 BC 0A-9A 00 00 00 00 83 C4 0C	+V...~.....
0013D0	6A 03 6A 02 9A 00 00 00-00 B3 C4 04 8E 06 00 00	j.j.....
0013E0	26 FF 36 00 00 6A 01 9A-00 00 00 00 83 C4 04 6A	&.6..j.....j
0013F0	00 6A 03 6A FF 6A 02 9A-00 00 00 00 83 C4 08 6A	.j.j.j.....j
001400	00 6A 03 6A FF 6A 02 9A-00 00 00 00 83 C4 0B 9A	.j.j.j.....
001410	00 00 00 00 9A 00 00 00-00 B8 01 00 1F 5E 5F C9	.....^..

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001420	CB	90	CB	00	00	00	1E	BB-00	00	BE	DB	6A	00-6A	00	.....j.j.
001430	6A	00	FF	76	0B	FF	76	06-0E	EB	00	00	B3	C4	0A	1F
001440	C9	CB	E6	9C	2B	00	84	72-56	1C	CB	60	9D	CC	4D	56
001450	14	CC	48	56	0F	CC	40	56-15	CC	30	56	15	CC	20	56
001460	12	C4	1B	56	22	C4	16	9C-CC	0D	56	16	CC	01	56	1B
001470	BE	BA	02	00	00	74									
001470	BE	BA	02	00	00	74									

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000000	80	0B	00	09	71	75	61	64-5F	39	37	2E	63	61	68	07	....quad_97.ca..
000010	00	00	00	4D	53	20	43	6E-88	09	00	00	9F	4C	4C	49	...MS Cn.....LLI
000020	42	43	45	25	8B	06	00	00-9D	32	6C	4F	E8	88	06	00	BCEX.....210....
000030	00	A1	01	43	56	37	96	35-00	00	06	44	47	52	4F	55	...CV7.5...DGR0U
000040	50	0C	51	55	41	44	5F	39-37	5F	54	45	58	54	04	43	P.GUAD_97_TEXT.C
000050	4F	44	45	05	5F	44	41	54-41	04	44	41	54	41	05	43	ODE._DATA.DATA.C
000060	4F	4E	53	54	04	5F	42	53-53	03	42	53	53	37	98	07	ONST._BSS.BSS7..
000070	00	48	B8	23	03	04	01	36-98	07	00	48	9A	0A	05	06	.H.#...6...H....
000080	01	69	98	07	00	48	2E	00-07	07	01	DC	98	07	00	48	....H.....H
000090	1E	00	08	09	01	E9	9A	08-00	02	FF	03	FF	04	FF	02	.....
0000A0	56	9C	0D	00	00	03	01	02-02	01	0C	04	40	01	45	01	.....E.E.
0000B0	00	8C	A8	00	09	5F	5F	66-6C	74	75	73	65	64	00	06	.....fltused..
0000C0	46	4A	53	52	51	51	00	06-46	49	53	52	51	00	06	06	FISR0Q..FISR0Q..
0000D0	46	49	45	52	51	51	00	06-46	49	44	52	51	00	06	06	FIER0Q..FIDR0Q..
0000E0	46	49	57	52	51	51	00	0A-5F	5F	61	63	72	74	75	73	FIWR0Q.._acrtua
0000F0	65	64	00	13	5F	67	65	74-5F	65	78	70	65	72	69	6D	ed..._get_experim
000100	65	6E	74	5F	6B	65	79	00-11	5F	72	65	61	64	5F	72	ent_key..._read_r
000110	61	6D	5F	64	69	73	6B	5F-66	62	00	09	5F	5F	61	46	am_disk_fb..._AF
000120	75	6C	64	69	76	00	12	5F-67	65	74	5F	70	69	78	65	uldiv..._get_pixe
000130	6C	73	5F	70	65	72	5F	6D-6D	00	0C	5F	6D	65	73	73	is_per_mm..._mess
000140	61	67	65	5F	6F	66	66	00-07	5F	5F	63	74	79	70	65	age_off..._ctype
000150	00	08	5F	73	70	72	69	6E-74	66	00	8A	B4	09	00	06	...sprintf.....
000160	6D	76	5F	63	69	72	00	BD-8C	16	00	08	5F	6D	65	6E	mv_cir....._men
000170	75	5F	77	6E	00	09	5F	69-6D	5F	70	61	69	6E	74	00	u_wn..._im_paint.
000180	45	B4	1D	00	0D	63	6C	65-61	72	5F	59	4E	5F	66	6C	E....clear_YN_fl
000190	61	67	00	0B	52	45	50	4F-52	54	5F	43	49	52	43	00	ag...REPORT_CIRC.
0001A0	B5	8C	4E	01	07	5F	75	6E-6C	69	6E	6B	00	10	5F	63	...N..._unlink..._c
0001B0	6C	65	61	72	5F	6D	65	6E-75	5F	61	72	65	61	00	0B	lear_menu_area..
0001C0	5F	69	6D	5F	72	6F	77	72-00	17	5F	77	72	69	74	65	_im_rowr..._write
0001D0	5F	64	65	6E	73	69	74	79-5F	72	65	63	6F	72	64	39	_density_record5
0001E0	37	00	15	5F	63	6C	6F	73-65	5F	73	74	61	6E	64	61	7..._close_standa
0001F0	72	64	73	5F	66	69	6C	65-00	08	5F	69	6D	5F	72	6F	rds_file..._im_ro
000200	77	77	00	0A	5F	69	6D	5F-74	6F	64	69	73	6B	00	0E	ww..._im_todisk..
000210	5F	67	65	74	5F	73	74	61-6E	64	61	72	64	73	00	07	_get_standards..
000220	5F	65	72	72	6D	73	67	00-0C	5F	69	6D	5F	64	72	61	_errmsg..._im_dra
000230	77	6D	6F	64	65	00	0F	5F-73	65	74	5F	6D	65	6E	75	wmode..._set_menu
000240	5F	74	69	74	6C	65	00	06-5F	63	6C	6F	73	65	00	08	_title..._close..
000250	5F	71	75	61	64	5F	39	37-00	07	5F	73	74	72	64	73	_quad_97..._strds
000260	70	00	0E	5F	73	65	74	5F-6D	65	6E	75	5F	6C	69	6E	p..._set_menu_lin
000270	65	00	06	5F	64	65	6E	73-6D	00	0B	5F	69	6D	5F	6F	e...densm..._im_o
000280	75	74	70	61	74	68	00	0C-5F	73	65	74	5F	6D	65	73	utpath..._set_mes
000290	73	61	67	65	00	07	5F	6D-76	5F	62	6F	78	00	0E	5F	sage..._mv_box..._
0002A0	69	6D	5F	69	6E	74	65	72-69	6D	61	67	65	00	11	5F	im_interimage...
0002B0	73	65	74	5F	73	63	72	65-65	6E	5F	74	69	74	6C	65	set_screen_title
0002C0	00	0A	5F	69	6D	5F	63	69-72	63	6C	65	00	16	5F	67	..._im_circle..._g
0002D0	65	74	5F	66	5F	6F	70	74-69	63	61	6C	5F	64	65	6E	et_f_optical_den

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0002E0	73	69	74	79	00	0A	5F	69-6D	5F	70	69	7B	62	6C	74	sity.._im_pixblt
0002F0	00	23	B4	19	00	0B	43	4C-45	41	52	5F	46	52	41	4D	.#....CLEAR_FRAM
000300	45	00	09	74	65	78	74	5F-70	72	65	70	00	13	8C	15	E..text_prep....
000310	00	12	5F	77	72	69	74	65-5F	72	61	6D	5F	64	69	73	...write_ram_dis
000320	6B	5F	66	62	00	F3	B4	0A-00	07	72	6F	77	5F	74	78	k_fb.....row_tx
000330	74	00	24	8C	4C	00	05	5F-6F	70	65	6E	00	1C	5F	75	t.\$L...open...u
000340	70	64	61	74	65	5F	6D	6F-75	73	65	5F	62	75	74	74	pdate_mouse_butt
000350	6F	6E	5F	64	69	73	70	6C-61	79	00	0C	5F	69	6D	5F	on_display.._im
000360	73	63	74	63	6F	6C	6F	72-00	07	5F	49	4E	54	44	53	setcolor...INTDS
000370	50	00	0D	5F	69	6D	5F	73-65	74	62	63	6F	6C	6F	72	P..._im_setbcolor
000380	00	8B	B4	0E	00	0E	4C	41-42	45	4C	5F	43	45	4C	4C	.....LABEL_CELL
000390	53	00	01	8C	2B	00	09	5F-69	6D	5F	6F	62	73	75	6D	S....+_im_obsum
0003A0	00	03	5F	6B	69	00	07	5F-76	5F	70	6C	73	74	00	0F	...ki...v_plst..
0003B0	5F	67	65	74	5F	64	69	73-6B	5F	73	70	61	63	65	00	_get_disk_space.
0003C0	2F	B4	0B	00	08	6C	61	62-65	6C	5F	72	63	00	05	8C	/....label_rc...
0003D0	73	00	07	5F	6B	69	5F	63-68	6B	00	08	5F	69	6D	5F	s...ki_chk..._im
0003E0	69	6E	69	74	00	17	5F	67-65	74	5F	72	61	6D	64	69	init..._get_ramdi
0003F0	73	6B	5F	66	72	65	65	5F-73	70	61	63	65	00	0A	5F	sk_free_space...
000400	69	6D	5F	6F	70	6D	6F	64-65	00	06	5F	77	72	69	74	_im_omode..._whit
000410	65	00	0D	5F	69	6D	5F	64-69	73	66	6F	72	6D	61	74	e..._im_disformat
000420	00	09	5F	69	6D	5F	76	69-64	65	6F	00	0C	5F	6F	6B	..._im_video..._ok
000430	5F	74	6F	5F	70	72	69	6E-74	00	08	5F	69	6D	5F	73	_to_print..._im_s
000440	79	6E	63	00	3A	B4	1B	00-07	42	55	49	4C	44	5F	33	ync:.....BUILD_3
000450	00	0C	51	55	41	44	5F	39-37	5F	4C	4F	47	4F	00	95	..QUAD_97_LOGD..
000460	8C	32	00	07	5F	6D	6F	75-73	65	72	00	12	5F	64	65	..2..._mouse..._de
000470	6C	65	74	65	5F	72	61	6D-64	69	73	6B	5F	66	62	00	lete_ramdisk_fb.
000480	0B	5F	69	6D	5F	6D	6F	76-65	00	0B	5F	69	6D	5F	72	..._im_move..._im_r
000490	65	63	74	00	4F	B4	0E	00-0B	52	45	50	4F	52	54	5F	ect.0....REPORT
0004A0	4D	4F	44	45	00	D3	8C	54-00	07	5F	53	54	52	44	53	MODE...T...STRDS
0004B0	50	00	1C	5F	67	65	74	5F-73	74	61	6E	64	61	72	64	P..._get_standard
0004C0	5F	67	72	69	64	5F	73	74-72	75	63	74	75	72	65	00	_grid_structure.
0004D0	1C	5F	70	75	74	5F	66	69-72	73	74	5F	64	65	6E	73	...put_first_dens
0004E0	69	74	79	5F	73	74	72	75-63	74	75	72	65	00	0C	5F	ity_structure...
0004F0	69	6D	5F	66	72	6F	6D	64-69	73	6B	00	11	B4	10	00	_im_fromdisk.....
000500	0D	59	4E	72	65	73	70	6F-6E	73	65	6D	73	67	00	D2	.YNresponsemsg..
000510	8C	2B	00	09	5F	63	6C	5F-6F	76	6C	75	74	00	06	5F	...+_cl_ovlut...
000520	5F	66	74	6F	6C	00	08	5F-69	6D	5F	77	6C	75	74	00	_ftol..._im_wlut.
000530	0B	5F	69	6D	5F	6F	75	74-6D	6F	64	65	00	FC	B4	0A	..._im_outmode....
000540	00	07	4D	56	5F	43	49	52-34	00	27	8C	4A	00	08	5F	..MV_CIR4...J..._
000550	69	6D	5F	6D	61	73	6B	00-09	5F	69	6D	5F	69	6D	61	_im_mask..._im_ima
000560	67	65	00	1A	5F	70	75	74-5F	6E	74	68	5F	64	65	6E	ge..._put_nth_den
000570	73	69	74	79	5F	73	74	72-75	63	74	75	72	65	00	09	sity_structure...
000580	5F	69	6D	5F	63	6C	65	61-72	00	0B	5F	6D	65	73	73	_im_clear..._mess
000590	61	67	65	5F	6F	6E	00	E9-B6	2D	00	00	01	06	6D	76	age_on....-....mv
0005A0	5F	63	69	72	46	23	00	0D-63	6C	65	61	72	5F	59	4E	_cirF#...clear_YN
0005B0	5F	66	6C	61	67	8C	00	00-0B	52	45	50	4F	52	54	5F	_flag....REPORT_

	EP 0 401 077 A2																
0005C0	43	49	52	43	94	1A	00	79-90	2A	00	00	01	17	5F	77	CIRC...y.*...._w	
0005D0	72	69	74	65	5F	64	65	6E-73	69	74	79	5F	72	65	63	rite_density_rec	
0005E0	6F	72	64	39	37	9A	00	00-08	5F	71	75	61	64	5F	39	ord97...._quad_9	
0005F0	37	6E	01	00	0D	B6	BB	00-00	01	0B	43	4C	45	41	52	7n.....CLEAR	
000600	5F	46	52	41	4D	45	30	1F-00	09	74	65	78	74	5F	70	_FRAME0...text_p	
000610	72	65	70	D6	19	00	07	72-6F	77	5F	74	78	74	FC	19	rep....row_txt..	
000620	00	0B	4C	41	42	45	4C	5F-43	45	4C	4C	53	8E	1F	00	..LABEL_CELLS...	
000630	0B	6C	61	62	65	6C	5F	72-63	02	20	00	07	42	55	49	.label_rc. ..BUI	
000640	4C	44	5F	33	6C	1E	00	0C-51	53	41	44	5F	39	37	5F	LD_31...QUAD_97_	
000650	4C	4F	47	4F	06	1E	00	0B-52	45	50	4F	52	54	5F	4D	LOG0....REPORT_M	
000660	4F	44	45	22	1A	00	0D	59-4E	72	65	73	70	6F	6E	73	ODE"...YNresponse	
000670	65	6D	73	67	00	00	00	07-4D	56	5F	43	48	52	34	26	emsg....MV_CIR48	
000680	22	00	2A	88	04	00	00	A2-01	D1	A0	D2	00	02	06	00	".*.....	
000690	4E	6F	20	73	74	61	6E	64-61	72	64	73	20	66	69	6C	No standards fil	
0006A0	65	20	65	78	69	73	74	73-2C	20	63	61	6C	27	74	20	e exists. can't	
0006B0	73	61	76	65	20	64	61	74-61	2E	0A	50	72	65	73	73	save data..Press	
0006C0	20	61	6E	79	20	6B	65	79-20	74	6F	20	67	6F	6E	74	any key to cont	
0006D0	69	6E	75	65	2E	00	71	75-61	64	5F	39	37	36	20	43	inue...quad_97: C	
0006E0	61	6E	27	74	20	77	72	69-74	65	20	63	65	6C	6C	20	an t write cell	
0006F0	64	65	6E	73	69	74	79	20-64	61	74	61	20	74	6F	20	density data to	
000700	73	74	61	6E	64	61	72	64-73	20	66	69	6C	65	2E	20	standards file.	
000710	43	61	6C	6C	20	42	56	49-2E	00	71	75	61	64	5F	39	Call BVI..quad_9	
000720	37	3A	20	43	61	6E	27	74-20	77	72	69	74	65	20	63	7: Can't write c	
000730	65	6C	6C	20	64	65	6E	73-69	74	79	20	64	61	74	61	ell density data	
000740	20	74	6F	20	73	74	61	6E-64	61	72	64	73	20	66	69	to standards fi	
000750	6C	65	2E	20	43	61	6C	6C-20	42	56	49	2E	00	EB	A0	le. Call BVI....	
000760	67	02	02	D6	00	42	69	6F-6C	6F	67	69	63	61	6C	20	g....Biological	
000770	56	69	73	69	6F	6E	20	2D-20	51	55	41	44	20	2D	20	Vision - QUAD -	
000780	50	72	6F	62	65	20	64	69-66	65	65	72	65	6E	63	65	Probe difference	
000790	20	61	6E	64	20	25	20	63-68	61	6E	67	65	00	71	75	and % change.ou	
0007A0	61	64	5F	39	37	3A	20	4E-6F	74	20	65	6E	6F	75	67	ad_97: Not enoug	
0007B0	68	20	64	69	73	6B	20	73-70	61	63	65	20	74	6F	20	h disk space to	
0007C0	72	75	6E	2E	00	71	75	61-64	5F	39	37	3A	20	4E	6F	run...quad_97: No	
0007D0	74	20	65	6E	6F	75	67	68-20	72	61	6D	20	64	69	73	t enough ram dis	
0007E0	6B	20	73	70	61	63	65	20-74	6F	20	72	75	6E	2E	00	k space to run..	
0007F0	2D	2D	2D	2D	2D	20	50	52-4F	43	45	53	53	49	4E	47	----- PROCESSING	
000800	20	49	4D	41	47	45	53	20-2D	2D	2D	2D	2D	00	43	61	IMAGES -----Ca	
000810	6E	27	74	20	61	63	63	65-73	73	20	67	72	69	64	20	n't access grid	
000820	64	61	74	61	2C	20	75	73-69	6E	67	20	64	65	66	61	data, using defa	
000830	75	6C	74	73	00	55	73	69-6E	67	20	64	65	66	61	75	ults.Using defau	
000840	6C	74	20	67	72	69	64	20-73	74	72	75	63	74	75	72	lt grid structur	
000850	65	20	64	61	74	61	00	5C-62	76	69	5C	6D	69	6E	2E	e data.\bvi\min.	
000860	70	69	63	00	5C	62	76	69-5C	68	6F	6C	64	2E	70	69	pic.\bvi\hold.pi	
000870	63	00	2D	2D	2D	2D	2D	20-43	41	4C	43	55	4C	41	54	c.----- CALCULAT	
000880	49	4E	47	20	4F	50	54	49-43	41	4C	20	44	45	4E	53	ING OPTICAL DENS	
000890	49	54	59	20	2D	2D	2D	2D-2D	00	2D	2D	2D	2D	2D	20	ITY -----	



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000BB0 00 20 20 20 20 20 4C 45-46 54 20 26 20 4D 49 44
000B90 44 4C 45 20 20 20 20 20-B3 20 20 20 20 4D 49 44
000BA0 44 4C 45 20 26 20 52 49-47 48 54 20 20 20 20 00
000BB0 20 C4 C4 53 41 56 45 2F-50 52 49 4E 54 20 56 61
000BC0 6C 75 65 73 C4 C4 20 B3-20 20 20 20 C4 C4 C4 4E
000BD0 6F 74 20 55 73 65 64 C4-C4 C4 20 20 20 20 00 CD
000BE0 CD CD CD CD CD CD CD CD CD CD CD CD CD CD CD
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000C00 CD CD CD CD CD CD CD CD CD CD CD CD CD CD CD
000C10 20 20 20 20 20 20 20 20-20 4C 45 46 54 20 20 26
000C20 20 20 4D 49 44 44 4C 45-20 20 26 20 20 52 49 47
000C30 46 54 20 20 20 20 20 20 20-20 20 20 00 20 20 20
000C40 20 20 20 20 20 20 20 20 20-C4 C4 C4 C4 50 72 65 73
000C50 73 20 41 6C 6C 20 54 68-72 65 65 20 74 6F C4 C4
000C60 C4 20 20 20 20 20 20 20 20-20 20 20 00 20 20 20
000C70 45 58 49 54 20 50 72 6F-62 65 20 44 6F 66 66 65
000C80 72 65 6E 63 65 20 26 20-50 65 72 63 65 6E 74 20
000C90 43 68 61 6E 67 65 20 20-20 20 00 CD C1 CD CD CD
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000CB0 CD CD CD CD CD CD CD CD CD CD CD CD CD CD CD
000CC0 CD CD CD CD CD CD CD CD CD CD CD CD CD CD CD
000CD0 6F 76 65 20 72 65 63 74-61 6E 67 6C 65 20 74 6F
000CE0 20 73 65 6C 65 63 74 20-61 6E 61 6C 79 73 69 73
000CF0 20 72 65 67 69 6F 6E 2E-00 20 20 32 2E 20 4C 65
000D00 66 74 20 42 75 74 74 6F-6E 20 74 6F 20 73 77 69
000D10 74 63 68 20 74 6F 20 61-6E 61 6C 79 73 69 73 20
000D20 6D 6F 64 65 2E 20 20 00-20 20 33 2E 20 33 69 7A
000D30 65 20 61 6E 64 20 6D 6F-76 65 20 63 75 72 73 6F
000D40 72 20 61 6E 64 20 63 61-6C 63 75 6C 61 74 65 20
000D50 4F 44 2E 20 20 20 00 CD-CD CD CD CD CD CD CD CD
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000D80 CD CD CD CD CD 3C A0 21 00-02 AD 07 CD 00 31 00 32
000D90 00 33 00 34 00 35 00 36-00 37 00 38 00 39 00 31
000DA0 30 00 31 31 00 31 32 00-B9 A0 14 00 02 FA 07 41
000DB0 00 42 00 43 00 44 00 45-00 46 00 47 00 48 00 25
000DC0 A0 2E 02 02 2A 08 4D 6F-76 65 20 43 69 72 63 6C
000DD0 65 73 20 2F 20 52 61 64-69 75 73 20 3D 20 25 32
000DE0 64 00 53 69 7A 65 20 43-69 72 63 6C 65 73 20 2F
000DF0 20 52 61 64 69 75 73 20-3D 20 25 32 64 00 4D 6F
000E00 76 65 20 49 6D 61 67 65-73 00 29 00 20 C9 CD CD
000E10 CD CD CD CD CD CD CD CD CD CD D1 CD CD CD CD CD
000E20 CD CD CD CD CD CD CD CD CD CD BB-00 20 BA 20 20 20 20
000E30 CD CD CD CD CD CD CD CD CD BB-00 20 BA 20 20 20 20
000E40 25 36 64 20 20 B3 20 20-20 20 25 36 64 20 20 20
000E50 B3 20 43 65 6C 6C 20 20-3D 20 25 73 25 32 73 20

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d.Size Circles /
Radius = %2d.Mo
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..... %6d . %6d
. Cell = %s%2s

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002B20	0E 9C C4 0B 56 05 C4 06-56 05 C4 00 56 05-83 A0	....V....V....V.S.
002B30	B6 03 01 42 11 9A 00 00-00 00 83 C4 08 8D 86 FC	...B.....
002B40	F6 B9 46 D4 8C 56 D6 6A-0A 1E 68 93 02 16 50 9A	..F..V.j..h...P.
002B50	00 00 00 00 83 C4 0A 6A-01 8D 86 FC F6 16 50 FF	.....j.....P.
002B60	76 A2 9A 00 00 00 00 83-C4 08 FF 76 A2 9A 00 00	v.....v....
002B70	00 00 83 C4 02 C7 86 BA-F6 00 00 C7 86 4C F7 00	.....L..
002B80	00 68 FE 00 9A 00 00 00-00 83 C4 02 6A 00 6A 02	.h.....j.j.
002B90	9A 00 00 00 00 83 C4 04-6A 00 FF 76 BC 6A FF FF	.....j..v.j..
002BA0	76 BA 9A 00 00 00 00 83-C4 08 FF 76 BC 6A 00 9A	v.....v.i..
002BB0	00 00 00 00 83 C4 04 1E-68 96 02 9A 00 00 00 00	.....h.....
002BC0	83 C4 04 FF 76 BA 6A 00-9A 00 00 00 00 83 C4 04	....v.j.....
002BD0	1E 58 A4 02 9A 00 00 00-00 83 C4 04 5B 86 EA F6	.h.....
002BE0	99 2B C2 D1 F8 40 89 86-D4 F6 8B 86 DC F6 99 2B	.+...@.....+
002BF0	C2 D1 F8 03 F1 00 89 86-BE F6 FF 86 A0 F2 9A 00	.....
002C00	00 00 00 83 C4 02 A1 0A-00 99 B9 04 00 F7 F9 8E	.....
002C10	08 A1 06 00 99 2B C2 D1-F8 03 C1 89 46 D0 2B F6	.....+.....F.+
002C20	A1 0A 00 99 2B C2 D1 F8-F7 EE 03 46 D0 89 46 A0	.....+.....F..F.
002C30	56 0E EB 00 00 83 C4 02-8E D8 BE C2 57 8B FB B9	V.....W...
002C40	FF FF 33 C0 F2 AE F7 D1-49 5F 8B F9 56 0E EB 00	..3.....I...V...
002C50	00 83 C4 02 52 50 57 57-6A 01 68 FA 00 FF 76 A0	....RPWWj.n...v.
002C60	6A 01 6A 00 9A 00 00 00-00 83 C4 12 46 83 FE 0B	j.j.....F...
002C70	7E AE 89 BE 5A F7 89 B6-A6 F4 A1 0C 00 99 B9 04	~...Z.....
002C80	00 F7 F9 8B C8 A1 08 00-99 2B C2 D1 F8 03 C1 05	.....+.....
002C90	F7 00 89 46 C8 2B F6 A1-0C 00 99 2B C2 D1 F8 F7	...F.+.....+
002CA0	EE 03 46 C8 89 86 5C F7-56 0E EB 00 00 83 C4 02	..F...V.....
002CB0	8B D8 BE C2 57 8B FB B9-FF FF 33 C0 F2 AE F7 D1	....W.....3.....
002CC0	49 5F 8B F9 56 0E EB 00-00 83 C4 02 52 50 57 57	I...V.....RPWW
002CD0	6A 02 FF B6 5C F7 6A 0B-6A 01 6A 00 9A 00 00 00	j...V.j.j.j....
002CE0	00 83 C4 12 46 83 FE 07-7E AD 89 BE 5A F7 89 B6	....F...Z...
002CF0	A6 F4 8B 86 BE F6 03 86-D8 F6 50 8B 86 D4 F6 03	.....P.....
002D00	86 E0 F6 50 FF B6 BE F6-FF B6 D4 F6 FF 76 BA 6A	...P.....v.j
002D10	00 9A 00 00 00 00 83 C4-0C FF B6 D2 F6 FF B6 DE	.....
002D20	F6 FF B6 DC F6 FF B6 EA-F6 0E EB 00 00 83 C4 08	.....
002D30	FF B6 A0 F2 9A 00 00 00-00 83 C4 02 E9 74 04 83	.....t..
002D40	7E A4 00 74 03 E9 FD 02-FF 76 BC 6A 01 9A 00 00	~.t.....v.j....
002D50	00 00 83 C4 04 68 FF 00-9A 00 00 00 00 83 C4 02	.....h.....
002D60	FF B6 A0 F2 9A 00 00 00-00 83 C4 02 FF B6 EC F6	.....
002D70	9A 00 00 00 00 83 C4 02-FF 76 BA 6A 00 9A 00 00	.....v.j....
002D80	00 00 83 C4 04 FF 76 BA-9A 00 00 00 00 83 C4 02	.....v.....
002D90	6A 00 6A 02 9A 00 00 00-00 83 C4 04 6A 01 6A 00	j.j.....j.j.
002DA0	9A 00 00 00 00 83 C4 04-6A 00 9A 00 00 00 00 83	.....j.....
002DB0	C4 02 2B F6 8B 9E 54 F7-C1 E3 02 8B 87 7C 03 8B	...+...T.....i..
002DC0	97 7E 03 89 86 84 F2 89-96 86 F2 8D 86 B0 F6 B9	~.....
002DD0	86 BE F2 8C 96 90 F2 8D-86 C4 F6 89 86 9A F2 8C	.....
002DE0	96 9C F2 8D 46 F4 89 86-80 F2 8C 96 82 F2 8D 46	....F.....F
002DF0	F4 89 86 7C F2 8C 96 7E-F2 8B BE A0 F2 6A 01 68	...i...~.....j.h

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002E00	F0 00 6A 06 FF 76 BC FF-76 BC 9A 00 00 00 00 83	...j...v...v.....
002E10	C4 0A 57 9A 00 00 00 00-83 C4 02 C4 9E 8E F2 26	..W.....&
002E20	BB 07 03 86 CC F6 50 C4-9E 9A F2 26 BB 07 03 86	.....P.....&....
002E30	DA F6 50 FF B6 54 F7 FF-76 BC 6A 00 0E E8 00 00	..P..T..v..j.....
002E40	B3 C4 0A 57 6A 00 9A 00-00 00 00 83 C4 04 6A 00	...Wj.....j..
002E50	6A 02 9A 00 00 00 00 83-C4 04 FF B6 EC F6 9A 00	j.....
002E60	00 00 00 83 C4 02 57 FF-76 BC FF 76 BA 9A 00 00	.....W.v..v.....
002E70	00 00 83 C4 06 89 46 AE-89 56 B0 83 FE 02 7C 29	.....F..V.....D
002E80	89 96 76 F2 89 86 74 F2-C7 86 7B F2 00 00 C7 86	..v...t...x.....
002E90	7A F2 00 00 9E DF AE 74-F2 9B DA 4E AB 9A 00 00	z.....v...N....
002EA0	00 00 C4 9E 80 F2 EB 18-90 FF B6 86 F2 DF B6 84	.....
002EB0	F2 FF 76 B0 FF 76 AE 9A-00 00 00 00 C4 FE 7C F2	..v...v.....i..
002EC0	26 89 07 83 86 8E F2 02-83 86 FA F2 02 83 86 B0	.....
002ED0	F2 02 83 86 7C F2 02 46-83 FE 03 7F 03 E9 1D FF	.....l..F.....
002EE0	89 B6 A6 F4 8B 46 FA 06-7C C6 00 CF 83 56 0A CF	.....F.....V..
002EF0	69 56 51 C7 64 56 05 C7-5F 56 05 CF 3F 56 36 CF	ivB..6V..._V...9V6.
002F00	2A 56 55 CF 1E 56 3E CF-12 56 11 87 0F 56 0F CE	*VU..V>...V...V..
002F10	DF 56 55 CE D6 56 56 C6-8C 8D C6 86 81 CE 76 56	.VU..VV.....VV
002F20	53 CE 6C 56 41 CE 60 56-3E CE 54 56 0F CE 49 56	S..1VA..V>..TV...1V
002F30	3E CE 3C 56 55 CE 30 56-32 CE 24 56 34 CE 19 56	>..VU..0V2.*V4...V
002F40	3E CE 00 56 55 85 F6 56-44 CD DD 56 25 CD AB 56	>..VU..VD...V3...V
002F50	21 85 92 56 2F 85 76 56-2F C5 63 9F C5 51 9F C5	!..V/.vV/.c..0..
002F60	46 9F CD 30 56 21 85 1A-56 2D 84 FE 56 2D C4 EC	F...0V!..V-..V-..
002F70	9F C4 DD 9F C4 D2 9F CC-CA 56 55 CC A0 56 4E C4	.....VU..VN..
002F80	9D 9D CC 94 56 3E CC 87-56 4E C4 84 9D CC 7B 56	.....V>..VN....>V
002F90	3E CC 6E 56 24 CC 5C 56-3E CC 50 56 55 CC 39 56	>..nV\$.V>..FVL.9V
002FA0	1F CC 2E 56 3F CC 1B 56-0E C4 16 9D CC 01 56 3F	...V?..V.....V?
002FB0	11 A0 B4 03 01 F4 14 2B-46 FB 89 46 FC 8B 46 FA	.....+F..F..F..
002FC0	3B 46 FB 7E 03 8B 46 FB-89 86 52 F7 0B C0 75 06	:F..~..F...R...u..
002FD0	C7 86 52 F7 01 00 6B 46-FC 64 99 F7 BE 52 F7 89	..R...kF.d...R..
002FE0	46 FE 6A 00 9A 00 00 00-00 83 C4 02 FF B6 EC F6	F..j.....
002FF0	9A 00 00 00 00 83 C4 02-6A 01 68 FE 00 6A 06 FF	.....j..h...j..
003000	76 BC FF 76 BC 9A 00 00-00 00 83 C4 0A 6A 01 FF	v...v.....j..
003010	76 BC 6A FF FF 76 BA 9A-00 00 00 83 C4 08 6A	v..j...v.....j..
003020	01 6A 01 9A 00 00 00 00-83 C4 04 6A 00 9A 00 00	.j.....j....
003030	00 00 83 C4 02 FF B6 A0-F2 9A 00 00 00 00 83 C4	.....
003040	02 C7 86 BA F6 01 00 FF-B6 4C F7 8D 46 D8 16 50	.....L..F..P
003050	BD 86 FC F6 16 50 9B D9-86 F8 F6 83 EC 08 8B DC	.....P.....
003060	9B 36 DD 1F 9B D9 86 4E-F7 83 EC 08 8B DC 9B 36	.6.....N.....6
003070	DD 1F 90 9B FF 36 0C 00-FF 36 0A 00 FF B6 54 F7	.....6...6....T.
003080	FF B6 CC F6 FF B6 DA F6-8D 46 F4 16 50 0E E8 00	.....F..F...P...
003090	00 83 C4 2B 0E E8 00 00-FF 76 B6 FF 76 CC FF 76	...(.v...v...v
0030A0	CA FF 76 D2 FF B6 A4 F4-FF 76 B8 FF 36 0C 00 FF	..v.....v...6...
0030B0	36 0A 00 0E E8 00 00 83-C4 10 68 FF 00 9A 00 00	6.....h.....
0030C0	00 00 83 C4 02 C7 86 C2-F6 00 00 FF B6 54 F7 6A	.....T..j
0030D0	00 FF 76 A4 0E E8 00 00-83 C4 06 6A 00 6A 02 9A	..v.....j..j..

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0030E0	00 00 00 00 B3 C4 04 FF-B6 A0 F2 9A 00 00 00 00	.....
0030F0	B3 C4 02 FF B6 CC F6 FF-B6 DA F6 FF B6 54 F7 FF	.....T..
003100	76 BA 6A 00 0E E8 00 00-B3 C4 0A 6A 00 9A 00 00	v.j.....j....
003110	00 00 B3 C4 02 B3 7E A4-01 74 03 E9 65 01 C7 46	.....~..t..e..F
003120	A4 01 00 E9 5D 01 90 B3-BE BA F6 00 75 03 E9 D5	....1.....u....
003130	F3 9B DF 46 FA B3 EC 04-BB DC 9B 36 D9 1F 9B DF	...F.....6.....
003140	46 FB B3 EC 04 BB DC 9B-36 D9 1F 90 9B FF B6 CC	F.....6.....
003150	F6 FF B6 DA F6 0E E8 00-00 B3 C4 0C B0 3E 04 00	.....>..
003160	00 74 1B 9A 00 00 00 00-0B C0 75 0F 6A 49 6A 43	.t.....u.jIjC
003170	1E 6B B1 02 0E E8 00 00-B3 C4 0B B0 3E 04 00 00	.h.....
003180	75 03 E9 E0 00 C7 B6 A6-F4 00 00 BD 46 DB BB DB	u.....F....
003190	BB FB BC D0 BE C0 B9 FF-FF 33 C0 F2 AE F7 D1 49	.....3.....I
0031A0	74 3B 6B 06 7A 03 16 BB-FB BB B6 A6 F4 BA 42 DB	t;k.z.....B.
0031B0	BB DE 03 DF 03 DB 36 BB-B7 60 F7 46 BB C6 BD 4E	.....6...F...N
0031C0	DB BB D9 BB D0 57 BB FB-BC D0 B9 FF FF 33 C0 F2	.....W.....3..
0031D0	AE F7 D1 49 5F 3B D1 72-D4 B9 B6 A6 F4 FF 06 7A	...1_...n.....z
0031E0	03 6A 01 1E 6B EC 02 9A-00 00 00 00 B3 C4 06 B9	.j..h.....
0031F0	46 A2 40 75 10 1E 6B F0-02 6A 01 9A 00 00 00 00	F.@u..h..j.....
003200	B3 C4 06 EB 55 9D B6 FC-F6 BB DB BB FB BC D0 BE	....U.....
003210	C0 B9 FF FF 33 C0 F2 AE-F7 D1 49 51 BD B6 FC F6	....3.....10....
003220	16 50 FF FF 76 A2 9A 00 00-00 00 B3 C4 0B BD B6 FC	.P.v.....
003230	F6 B9 46 D4 BC 56 D6 6A-0A 1E 6B 1B 03 16 50 9A	..F..V.j..h...P.
003240	00 00 00 00 B3 C4 0A 6A-01 BD B6 FC F6 16 50 FF	.....j.....P.
003250	76 A2 9A 00 00 00 00 B3-C4 0B FF 76 A2 9A 00 00	v.....v....
003260	00 00 B3 C4 02 C7 B6 BA-F6 00 00 C7 B6 4C F7 01	.....L....
003270	00 6A 01 0E E8 00 00 B3-C4 02 E9 89 F2 C7 B6 D6	.j.....
003280	F6 04 00 B3 BE D6 F6 03-F7 03 E9 8E F2 A1 00 00	.....
003290	0B 06 02 00 74 10 FF 36-02 00 FF 36 00 00 9A 00	....t..6...6....
0032A0	00 00 00 B3 C4 04 1E 6B-1E 03 9A 00 00 00 00 B3	.....h.....
0032B0	C4 04 1E 6B 2B 03 9A 00-00 00 00 B3 C4 04 9A 00	...h+.....
0032C0	00 00 00 1F 5E 5F C9 CB-90 CB 00 00 00 1E BB 00	.....^.....
0032D0	00 BE DB B3 7E 06 00 75-06 1E 6B FB 03 EB 04 1E	....~..u..h.....
0032E0	6B 2E 04 6A 01 9A 00 00-00 00 B3 C4 06 9A 00 00	h..j.....
0032F0	00 00 1E 6B 62 04 9A 00-00 00 00 B3 C4 04 B8 00	...hb.....
003300	00 BA 00 00 52 50 1E 6B-90 04 6A 00 6A 01 9A 00	....RP.h...j.j...
003310	00 00 00 B3 C4 0C BB 00-00 BA 00 00 52 50 1E 6B	.....RP.h
003320	BF 04 6A 00 6A 02 9A 00-00 00 00 B3 C4 0C BB 00	..j.j.....
003330	00 BA 00 00 52 50 1E 6B-EE 04 6A 00 6A 03 9A 00	....RP.h..j.j...
003340	00 00 00 B3 C4 0C BB 00-00 BA 00 00 52 50 1E 6B	.....RP.h
003350	1D 05 6A 00 6A 04 9A 00-00 00 00 B3 C4 0C BB 00	..j.j.....
003360	00 BA 00 00 52 50 1E 5A-9C 43 01 CB AB 56 10 C7	....RP.Z.C...V..
003370	AB 56 10 CF A0 56 3B C7-99 9D CB 93 56 10 C7 90	.V...VB.....V...
003380	56 10 CF BB 56 3B C7 81-9D CB 7B 56 10 C7 7B 56	V...VB.....{V...xV
003390	10 CF 70 56 3B C7 69 9D-CB 63 56 10 C7 60 56 10	..pVB.i...cV...V.
0033A0	CF 5B 56 3B C7 51 9D CB-4B 56 10 C7 4B 56 10 CF	.XVB.Q..KV..HV..
0033B0	40 56 1E C7 3D 9D CF 37-56 15 CF 2F 56 25 C7 2A	@V...=..7V../V%.*

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003300	9D C7 24 9D CB 18 9D CF-08	56 47 CF 00 56 14 C6	...\$......VG..V..
0033D0	FD 9D CE F4 56 14 C6 F1-9D	CE E8 56 18 C6 E5 9D	....V.....V....
0033E0	C6 E1 9D C6 DB 9D C6 D7-9D	86 BE 56 45 CE A7 56	.....VE..V
0033F0	1F CE 9C 56 3F CE 89 56-0E	C6 84 9D CE 6F 56 3F	...V?..V.....oV?
003400	CE 45 56 25 C6 40 9D CE-31	56 30 C6 2E 9D C6 2B	.EVZ.@..1V0....(
003410	9D C5 ED 9D C5 C6 9D 85-BF	56 4F C5 BB 9D CD AD	.....V0.....
003420	56 42 C5 A7 9D 85 A0 56-17	C5 74 56 06 C5 91 56	VB.....V...V...V
003430	02 C5 90 56 03 C5 87 56-05	C5 84 56 02 C5 83 56	...V...V...V...V
003440	03 C5 7A 56 05 CD 57 56-34	85 4F 56 54 CD 35 56	...zV..wV4.OVT.5V
003450	55 CD 29 56 3E 85 1F 56-4A	CD 07 56 34 84 FE 56	U.)V0..VJ..VA..V
003460	3A C4 FA 9F C4 F6 9F 84-0F	56 35 84 D5 56 13 C4	.....V8..V..
003470	C3 9F C4 BF 9F C4 BE 56-06	C4 85 56 02 C4 B7 56	.....V...V...V
003480	03 C4 AD 56 05 C4 AA 56-02	C4 84 56 03 C4 9F 56	...V...V...V...V
003490	05 CC 83 56 55 CC 77 56-34	CC 8D 56 41 CC 61 56	...VU.wV4.mVA.zV
0034A0	24 CC 4F 56 56 CC 3A 56-55	CC 2E 56 53 E4 A0 1D	*.OVV.:VU..V8...
0034B0	03 01 A4 18 68 4C 05 6A-00	6A 05 9A 00 00 00 00	....hL.j.j.....
0034C0	83 C4 0C B8 00 00 BA 00-00	52 50 1E 68 7B 05 6A	.....RP.h0.j
0034D0	00 6A 06 9A 00 00 00 00-83	C4 0C B8 00 00 BA 00	.j.....
0034E0	00 52 50 1E 68 AA 05 6A-00	6A 07 9A 00 00 00 00	.RF.h..j.j.....
0034F0	83 C4 0C B8 00 00 BA 00-00	52 50 1E 68 D9 05 6A	.....RP.h..j
003500	00 6A 08 9A 00 00 00 00-83	C4 0C B8 00 00 BA 00	.j.....
003510	00 52 50 1E 68 08 06 6A-00	6A 09 9A 00 00 00 00	.RF.h..j.j.....
003520	83 C4 0C B8 00 00 BA 00-00	52 50 1E 68 37 06 6A	.....RP.h7.j
003530	00 6A 0A 9A 00 00 00 00-83	C4 0C B8 00 00 BA 00	.j.....
003540	00 52 50 1E 68 66 06 6A-00	6A 0B 9A 00 00 00 00	.RF.hf.j.a.....
003550	83 C4 0C B8 00 00 BA 00-00	52 50 1E 68 95 06 6A	.....RP.h..j
003560	00 6A 0C 9A 00 00 00 00-83	C4 0C B8 00 00 BA 00	.j.....
003570	00 52 50 1E 68 C4 06 6A-00	6A 0D 9A 00 00 00 00	.RF.h..j.j.....
003580	83 C4 0C B8 00 00 BA 00-00	52 50 1E 68 F3 06 6A	.....RP.h..j
003590	00 6A 0E 9A 00 00 00 00-83	C4 0C B8 00 00 BA 00	.j.....
0035A0	00 52 50 1E 68 22 07 6A-00	6A 0F 9A 00 00 00 00	.RF.h".j.j.....
0035B0	83 C4 0C B8 00 00 BA 00-00	52 50 1E 68 51 07 6A	.....RP.h0.j
0035C0	00 6A 10 9A 00 00 00 00-83	C4 0C B8 00 00 BA 00	.j.....
0035D0	00 52 50 1E 68 80 07 6A-00	6A 11 9A 00 00 00 00	.RF.h..j.j.....
0035E0	83 C4 0C 1F C9 CB C8 00-00	00 1E B8 00 00 8E DB	.....
0035F0	83 7E 06 0B 7E 05 C7 46-06	0B 00 8B 5E 06 C1 E3	..~..~.F.....^...
003600	02 8B 87 CA 07 8B 97 DC-07	1F C9 CB C8 00 00 00	.....
003610	1E B8 00 00 8E DB 83 7E-06	07 7E 05 C7 46 06 07	.....^..~.F..
003620	00 8B 5E 06 C1 E3 02 8B-87	0A 08 8B 97 0C 0B 1F	..^.....
003630	C9 CB C8 50 00 00 1E B8-00	00 8E DB 8B 46 06 0B	...F.....F..
003640	C0 74 07 3D 01 00 74 38-EB	47 83 7E 08 00 75 14	.t.=..t8.G.~.u.
003650	FF 76 0A 1E 68 2A 08 BD-46	B0 16 50 9A 00 00 00	.v..h*.F..P....
003660	00 83 C4 0A 83 7E 08 01-75	27 FF 76 0A 1E 68 46	.....~.u/.v..hF
003670	08 BD 46 B0 16 50 9A 00-00	00 00 83 C4 0A EB 11	..F..P.....
003680	1E 68 62 08 BD 46 B0 16-50	9A 00 00 00 83 C4 06	.hb..F..P.....
003690	08 BD 46 B0 16 50 6A 01-9A	00 00 00 00 83 C4 06	..F..Pj.....

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0036A0	1F C9 CB 90 C8-12 02 00-57 56 1E B8 00 00 0E D8	.....WV.....
0036B0	B6 6E 0B 89 46 F4 8C 5E-F6 9B DF 46 0A 9B DC 46	.n..F..^...F...F
0036C0	14 9A 00 00 00 00 89 46-F0 9B DF 46 0C 9B DC 46	.....F...F...F
0036D0	1C 9A 00 00 00 00 89 86-0E FE 2B 06 0B 00 99 F7	.....+.....
0036E0	7E 12 05 02 00 89 46 FC-8B 46 F0 2B 06 06 00 99	~.....F..F.+....
0036F0	F7 7E 10 05 03 00 89 46-F8 9B DF 46 0A 9B DF 46	~.....F...F...F
003700	10 9B DE F9 9B DC 46 14-9B D9 9E 0B FE 9B DF 46	.....F.....F
003710	0C 9B DF 46 12 9B DE F9-9B DC 46 1C 9B D9 9E 00	...F.....F.....
003720	FE 9B D9 86 0B FE 9A 00-00 00 00 89 86 04 FE 9B	.....
003730	D9 86 00 FE 9A 00 00 00-00 89 86 FE FD 1E 68 70	.....hp
003740	0B 8D 86 10 FE 1E 50 9A-00 00 00 00 83 C4 0B FF	.....P.....
003750	B6 04 FE 0E EB 00 00 83-C4 02 52 50 FF B6 FE FD	.....RP....
003760	0E EB 00 00 83 C4 02 52-50 C4 5E 06 26 FF 77 06	.....RP...&.w.
003770	26 FF 77 04 1E 68 9D 0B-8D 86 60 FE 16 50 9A 00	&.w..h.....P..
003780	00 00 00 83 C4 14 FF 76-0E 1E 68 C6 0B 8D 86 B0	.....v..h.....
003790	FE 16 50 9A 00 00 00 00-83 C4 0A FF 76 F0 C4 5E	..F.....v....
0037A0	06 26 FF 77 0A 26 FF 77-0B 1E 68 F3 0B 8D 86 00	..&.w.&.w..h.....
0037B0	FF 16 50 9A 00 00 00 00-83 C4 0E FF B6 0E FE C4	..P.....
0037C0	5E 06 26 FF 77 02 26 FF-37 1E 68 1B 09 A8 9D 6D	..&.w.&.7..h....m
0037D0	01 C7 17 9D CF 00 56 0E-C6 F7 9D CE E0 56 0E C6	.....V.....V..
0037E0	D7 9D CE CB 56 0E C6 C2-9D 86 AE 56 2F 86 A1 56	....V.....V/V..V
0037F0	2D CE 94 56 0E C6 8B 9D-CE 81 56 51 C6 7B 56 05	...V.....VQ..(V.
003800	CE 73 56 51 C6 6D 56 05-C6 68 56 03 C6 64 56 05	..sVQ..mV...hV...dV.
003810	C6 61 56 05 C6 5B 56 05-C6 59 56 05 C6 54 56 05	..aV...jV...yV...TV.
003820	C6 50 56 05 C6 4D 56 05-C6 49 56 05 C6 45 56 05	..FV...MV...IV...EV.
003830	C6 39 9F C6 2B 9F CE 1E-56 51 C6 19 56 05 C6 15	..9...VQ...V...
003840	56 05 CE 0E 56 51 C6 09-56 05 C6 05 56 05 C5 FD	V...VQ...V...V...
003850	9D C9 F8 9D CD E5 56 25-CD D6 56 0E C5 CE 9D CD	.....V%...V.....
003860	C3 56 0E C5 BB 9D CD A9-56 0E C5 A1 9D C9 84 9D	..V.....V.....
003870	C5 79 9D C5 75 9D C9 5E-9D C5 53 9D C5 4F 9D C9	..y..u...^...S...D..
003880	3B 9D CD 2B 56 3B C5 21-9D C9 1B 56 10 C5 1B 56	B...VB...V...V...V
003890	10 CD 10 56 3B C5 09 9D-C9 03 56 10 C5 00 56 10	...VB...V...V...
0038A0	CC F8 56 3B C4 F1 9D C8-EB 56 10 C4 E8 56 10 CC	..VB.....V...V...
0038B0	E0 56 3B C4 D9 9D C8 D3-56 10 C4 D0 56 10 CC C8	..VB.....V...V...
0038C0	56 3B C4 C1 9D C8 BB 56-10 C4 B8 56 10 CC B0 56	V8.....V...V...V
0038D0	3B C4 A9 9D C8 A3 56 10-C4 A0 56 10 CC 98 56 3B	B.....V...V...VB
0038E0	C4 91 9D C8 8B 56 10 C4-8B 56 10 CC 80 56 3B C4	.....V...V...VB.
0038F0	79 9D C8 73 56 10 C4 70-56 10 CC 68 56 3B C4 61	y...sV...pV...hVB.a
003900	9D C8 5B 56 10 C4 5B 56-10 CC 50 56 3B C4 49 9D	..IV...XV...PV8.I.
003910	C8 43 56 10 C4 40 56 10 CC-20 56 3B C4 19 9D C8 13	..CV...eV...8V8.1..
003920	2B 56 10 C4 2B 56 10 CC-20 56 3B C4 19 9D C8 13	+V...V...VB.....
003930	56 10 C4 10 56 10 CC 0B-56 3B C4 01 9D 81 A0 B5	V...V...VB.....
003940	03 01 BD 1B 8D 86 50 FF-16 50 9A 00 00 00 83	.....P..F.....
003950	C4 0E 1E 68 42 09 8D 46-A0 16 50 9A 00 00 00 00	...hB..F..F.....
003960	83 C4 0B 2B F6 8D 86 10-FE 89 86 F6 FD 8C 96 F8	...+.....
003970	FD FF B6 F8 FD FF B6 F6-FD 8D 44 0C 50 9A 00 00	.....D.F...

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0039B0	00 00 B3 C4 06 B3 B6 F6-FD 50 46 B3 FE 06 7C E1	.....FF....!
003990	89 B6 06 FE 80 3E 04 00-00 74 18 9A 00 00 00 00	.....>...t.....
0039A0	0B C0 75 0F 6A 49 6A 43-1E 68 6F 09 0E E8 00 00	..u.jIjC.ho.....
0039B0	B3 C4 08 B0 3E 04 00 00-83 C4 06 89 86 0C FE 40	.....>...u..l.j..
0039C0	68 AA 09 9A 00 00 00 00-83 C4 06 89 86 0C FE 40	h.....@
0039D0	75 11 1E 68 AE 09 6A 01-9A 00 00 00 00 83 C4 06	u..h..j.....
0039E0	E9 3A 01 83 3E 6E 0A 00-75 03 E9 9E 00 1E 68 D9	....>n..u.....h.
0039F0	09 FF 76 26 FF 76 24 9A-00 00 00 00 83 C4 08 89	..v&.v\$.v&RP..
003A00	46 F2 1E 68 E6 09 03 4a-24 2B 56 26 52 50 9A 00	F..n...F\$.V&RP..
003A10	00 00 00 83 C4 08 01 46-F2 1E 68 F2 09 8B 46 F2	.....F..h...F.
003A20	03 46 24 8B 56 03 0A 50-9A 00 00 00 83 C4 08	..F\$.V&RP.....
003A30	01 46 F2 1E 68 03 0A 8B-4a F2 03 46 24 8B 56 26	..F..h...F..F\$.V&
003A40	52 50 9A 00 00 00 00 83-C4 08 01 46 F2 1E 68 1a	RP.....F..n.
003A50	0A 8B 46 F2 03 4a 24 8B-56 26 52 50 9A 00 00 00	..F..F\$.V&RP....
003A60	00 B3 C4 08 01 46 F2 C4-7E 24 B9 FF FF 33 C0 F2	.....F..~\$....3..
003A70	AE F7 D1 49 51 0a FF 7a-24 FF B6 0C FE 9A 00 00	...1Q..v\$.....
003A80	00 00 83 C4 02 C7 06 aE-0A 00 00 83 7E 2C 00 74	.....n.....t
003A90	04 FF 06 6C 0A C4 5E 0a-2a FF 77 0A 26 FF 77 08	...l...&.w.&.w.
003AA0	26 FF 77 06 26 FF 77 04-FF B6 FE FD 0E E8 00 00	&.w.&.w.....
003AB0	83 C4 02 52 50 FF B6 04-FE 0E E8 00 00 83 C4 02	...RP.....
003AC0	52 50 FF 76 F6 FF 76 F4-FF 3a aC 0A 1E 68 24 0A	RP.v...v...6l...h\$.
003AD0	FF 76 26 FF 76 24 9A 00-00 00 00 83 C4 1E C4 5E	..v&.v\$.....
003AE0	06 26 FF 77 0A 26 FF 77-08 26 FF 77 06 26 FF 77	..&.w.&.w.&.w.&.w
003AF0	04 FF B6 FE FD 0E E8 00-00 83 C4 02 52 50 FF B6	.....RP..
003B00	04 FE 0E E8 0C 00 83 C4-02 52 50 1E 68 42 0A FF	.....RP.hB..
003B10	76 2A FF 76 26 9A 00 00-00 00 83 C4 18 FF B6 0C	v\$.v(.....
003B20	FE 9A 00 00 00 00 83 C4-02 8B 46 0C 03 46 0E 05	.....F..F..
003B30	10 00 89 46 FA 3D EE 00-7E 0C 8B 46 0C 2B 46 0E	...F..=...^..F..+F.
003B40	2D 06 00 89 46 FA 8B 46-0A 89 46 FE 3D 0C 00 7D	...F..F..F..=...)
003B50	05 C7 46 FE 0C 00 81 7E-FE F4 00 7E 05 C7 46 FE	..F.....^.....F.
003B60	F4 00 6A 00 6A 01 9A 00-00 00 00 83 C4 04 6A 00	..j..j.....j.
003B70	9A 00 00 00 00 83 C4 02-C7 B6 06 FE 06 00 8B 46	.....F
003B80	06 8B 56 08 05 04 00 89-86 F6 FD 89 96 F8 FD BE	..V.....
003B90	64 0A BF 5C 0A C7 86 F0-FD 54 0A C7 86 EE FD 04	d...\.....T.....
003BA0	00 C4 9E F6 FD 26 8B 07-99 89 86 FA FD 89 96 FC	.....&.....
003BB0	FD 52 50 6A 01 6A 01 FF-34 6A 00 8B 05 03 46 FA	..RPj..j...4j....F.
003BC0	50 8B 9E F0 FD 8E 07 03-46 FE 50 5A 01 6A 00 9A	F.....F.Pj..j..
003BD0	00 00 00 00 83 C4 14 83-86 F6 FD 02 83 C6 02 B3	.....
003BE0	C7 02 83 86 F0 FD 02 FF-8E EE FD 75 B4 1F 5E 5F	.....u.....^
003BF0	C9 CB 90 C8 0C 00 00 1E-B8 00 00 8E D8 C7 46 FD	.....F.....F.
003C00	01 01 C7 46 F8 F1 00 C7-46 FA 00 00 C7 46 F4 00	...F....F....F..
003C10	00 C7 46 F6 01 01 C7 46-FE 00 00 68 FE 00 9A 00	..F....F...h....
003C20	00 00 00 83 C4 02 6A 00-6A 02 9A 00 00 00 00 83	.....j..j.....
003C30	C4 04 6A 00 9A 00 00 00-00 83 C4 02 6A 01 6A 00	..j.....j..j..
003C40	6A 00 6A 00 6A 00 FF 76-0C FF 76 0A FF 76 08 FF	j..j..j..v...v...v..
003C50	76 06 6A 02 9A 00 00 00-00 83 C4 14 6A 00 9A 00	v..j.....j...

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003C60	00 00 00 B3 C4 02 6A 01-6A 00 6A 00 68 01-01 6A	.....j.j.j.h..j
003C70	00 FF 76 0C FF 76 0A FF-76 08 FF 76 06 6A 03 9A	..v..v..v..v.j..
003C80	00 00 00 00 B3 C4 14 6A-00 9A 00 00 00 00 B3 C4	.....j.....
003C90	02 6A 01 6A 00 68 F1 00-68 01 01 6A 00 FF 76 0C	.j.j.h..h..j..v.
003CA0	FF 76 0A FF 76 08 FF 76-06 6A 01 9A 00 00 00 00	.v..v..v.j.....
003CB0	B3 C4 14 1F C9 CB 90 1E-B8 00 00 8E DB 6A 00 6A	.....j.j
003CC0	01 9A 00 00 00 00 83 C4-04 6A 00 9A 00 00 00 00	.....j.....
003CD0	B3 C4 02 6A 00 9A 00 00-00 00 83 C4 02 68 EF 00	...j.....h..
003CE0	6A 00 9A 00 00 00 00 83-C4 04 68 F0 00 68 FF 01	j.....h..h..
003CF0	9A 00 00 00 00 00 8A 9C D3-00 CF AD 56 49 CF 9F 56	.....Z.....VI..V
003D00	48 CF 92 56 32 CF 88 56-1D CF 7E 56 3E CB 73 9D	H..VZ..V..V>..u.
003D10	CF 68 56 2B CF 48 56 53-CF 3C 56 2B CF 1B 56 53	.hV+.FVS..V+.VS
003D20	CF 11 56 2B CE F1 56 53-CE E7 56 3E CE DB 56 55	..V+.VS..V>..VU
003D30	CA B5 9D CE 8C 56 33 C6-55 9D C6 4F 9D C6 4C 9D	.....V3.U..D..L.
003D40	CE 2D 56 1D CE 23 56 3E-CD DE 56 1F CD D2 56 0E	..-V..#V>..V..V.
003D50	C5 C9 9D B5 C0 56 2D B5-B3 56 2F CD 93 56 0E C5	.....V-..V/..V..
003D60	8A 7D C5 86 9D B5 77 56-2D B5 6A 56 2F C5 4F 9D	.....WV-..jV/..D.
003D70	C5 43 9D CD 3A 56 3F CD-19 56 0E C5 0B 9D CC FF	.C...V?..V.....
003D80	36 0E C4 F1 9D CC E5 56-0E C4 D7 9D CC CB 56 0E	V.....V.....V.
003D90	C4 C0 9D CC B4 56 0E C4-AB 9D C4 A1 9D CC 95 56	.....V.....V
003DA0	25 C4 9D 9D CC 80 56 30-C4 7D 9D C4 71 9D B4 6A	%......VO..d..j
003DB0	56 4F C4 66 9D CC 58 56-42 C4 52 9D CC 3A 56 22	VD.f..xVB.R...V"
003DC0	CC 18 56 0E C4 10 9D CC-07 56 0E 8A A0 B6 03 01	..V.....V.....
003DD0	6E 1F B3 C4 04 68 DF 01-68 FF 00 9A 00 00 00 00 B3 C4 04	n....h..h.....
003DE0	B3 C4 04 6A 00 68 00 01-9A 00 00 00 00 00 B3 C4 04	...j.n.....
003DF0	1F C5 1E B8 00 00 BE DB-1E 68 70 0A 6A 07 6A 07	.....hp.j.j.
003E00	6A 01 6A 0E 6A 03 6A 01-6A 00 9A 00 00 00 00 B3	j.j.j.j.j.....
003E10	C4 12 1E 68 78 0A 6A 0A-6A 0A 6A 02 6A 0E 68 FD	...hx.j.j.j.j.h.
003E20	01 6A 01 6A 00 9A 00 00-00 00 83 C4 12 1E 68 B3	.j.j.....h.
003E30	0A 6A 0A 6A 0A 6A 01 68-FF 00 6A 03 6A 01 6A 00	.j.j.j.h..j.j.j.
003E40	9A 00 00 00 00 83 C4 12-1E 68 BE 0A 6A 08 6A 08	.....h..j.j.
003E50	6A 02 68 FF 00 68 FD 01-6A 01 6A 00 9A 00 00 00	j.h..h..j.j.....
003E60	00 B3 C4 12 1F CB CB 12-00 00 57 56 1E B8 00 00	.....WV....
003E70	8E DB BB 46 0A B9 46 FE-8B 46 0E B9 46 F2 C7 46	...F..F..F..F..F
003E80	F4 00 00 BB 46 10 39 46-F2 7F 6A BB 46 FE B9 46	....F.9F.j.F..F
003E90	F0 BB 46 10 2B 46 0E 40-89 46 EE 01 46 F4 BB 76	..F..F.@.F..F..v
003EA0	F2 BB 46 F0 B9 46 FA 56-0E E8 00 00 B3 C4 02 BB	..F..F.V.....
003EB0	D8 BE C2 57 BB FB B9 FF-FF 33 C0 F2 AE F7 D1 49	...W.....3.....I
003EC0	5F BB F9 56 0E E8 00 00-83 C4 02 52 50 57 57 6A	_..V.....RPWWj
003ED0	01 68 F3 00 FF 76 FA 6A-01 6A 00 9A 00 00 00 00	.h...v.j.j.....
003EE0	B3 C4 12 46 BB 46 06 01-46 F0 3B 76 10 7E B2 B9	...F.F..F.;v..~..
003EF0	7E F8 89 76 F2 BB 46 0A-B0 C4 01 B9 46 FE BB 46	~..v..F.....F..F
003F00	0E B9 46 F2 C7 46 F4 00-00 BB 46 10 39 46 F2 7F	..F..F.....F.9F.
003F10	6A BB 46 FE B9 46 EE BB-46 10 2B 46 0E 40 B9 46	j.F..F..F..F.@.F
003F20	F0 01 46 F4 BB 76 F2 BB-46 EE B9 46 FA 56 0E E8	..F..v..F..F.V..
003F30	00 00 B3 C4 02 BB DB 8E-C2 57 BB FB B9 FF FF 33	.....W.....3

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003F40	C0	F2	AE	F7	D1	49	5F	8B-F9	56	0E	E8	00	00	83	C4	.....I...V.....
003F50	02	52	50	57	57	6A	01	68-F3	00	FF	76	FA	6A	01	6A	.RPWWj.h...v.j.j
003F60	00	9A	00	00	00	00	83	C4-12	46	8B	46	06	01	46	EE	.....F.F..F.
003F70	3B	76	10	7E	B2	B7	7E	F8-B9	76	F2	8B	46	0C	05	F7	:v...~...v..F...
003F80	00	B7	46	FC	8B	46	12	89-46	F2	C7	46	F4	00	00	8B	..F..F..F..F..F..
003F90	46	14	39	46	F2	7F	6A	8B-46	FC	B7	46	EE	8B	46	14	F..9F..j..F..F..F..
003FA0	2B	46	12	40	89	46	F0	01-46	F4	8B	76	F2	SB	46	EE	+F..B..F..F..v..F..
003FB0	89	46	F6	56	0E	E8	00	00-83	C4	02	8B	D8	8E	C2	57	.F..V.....W
003FC0	8E	FB	B9	FF	FF	33	00	F2-AE	F7	01	49	5F	8E	82	56	.....3.....I...V
003FD0	0E	E8	00	00	83	C4	02	52-50	87	81	6A	01	FF	76	F6	.....RPWWj...v..
003FE0	68	FC	00	6A	01	6A	00	9A-00	00	00	00	83	C4	12	46	n...j...j.....F
003FF0	8E	46	0B	01	46	EE	3E	76-14	7E	B2	89	7E	F8	89	7E	.F..F..F..F..F..F..
004000	F2	8B	46	0C	89	46	FC	2B-46	12	81	46	F2	C7	46	F4	..F..9F..j..F..F..
004010	00	00	8B	46	14	39	46	F2-7F	6A	8B	46	FC	B7	46	EE	.F..+F..B..F..F..v..
004020	89	46	14	2B	46	12	40	89-46	F0	01	46	F4	8B	76	F2	.F..F..F..V.....
004030	8B	46	EE	89	46	F6	56	0E-E8	00	00	83	C4	02	8B	D8	..W.....3.....j..
004040	8E	C2	57	8B	FB	B9	FF	FF-33	00	F1	AE	F7	D1	49	5F	..V.....RPWWj..
004050	8B	FB	56	0E	E8	00	00	87-C4	02	52	50	87	87	6A	01	..v.h...j...j.....
004060	FF	76	F6	68	FC	00	6A	01-6A	00	9A	00	00	00	00	83	..F..F..F..v..F..F..
004070	C4	12	46	8B	46	0B	01	46-EE	3B	76	14	7E	B2	89	7E	..v..j...j.....WV
004080	F8	89	76	F2	1F	5E	5F	CF-CB	90	C8	00	00	00	57	56	.....v..j.....
004090	1E	B8	00	00	8E	D8	FF	76-0B	6A	01	9A	00	00	00	00	.....v.....
0040A0	83	C4	04	FF	76	06	9A	00-00	00	00	83	C4	02	83	7E	..ut..6...6.....
0040B0	06	01	75	74	FF	36	14	00-FF	36	12	00	9A	00	00	00	.....6.....
0040C0	00	83	C4	04	FF	36	16	00-9A	00	00	00	00	83	C4	02	..6.....6...V...
0040D0	8B	36	12	00	81	C6	01	01-FF	36	14	00	56	9A	00	00	.....6.....
0040E0	00	00	83	C4	04	FF	36	16-00	9A	00	00	00	00	83	C4	..j.....W..6.....
0040F0	02	8B	3E	14	00	81	C7	F1-00	57	FF	36	12	00	9A	00	.....6.....
004100	00	00	00	83	C4	04	FF	36-16	00	9A	00	00	00	00	83	..WV.....6.....
004110	C4	02	57	56	9A	00	00	00-00	83	C4	04	FF	36	16	00	.....v..v.....
004120	9A	00	00	00	00	83	C4	02-FF	76	0E	FF	76	0C	9A	00	.....v.....v.....
004130	00	00	00	83	C4	04	FF	76-0A	9A	00	00	00	00	83	C4	..v.....v..v.....
004140	02	8B	76	0C	81	C6	61	01-FF	76	0E	56	9A	00	00	00	.....v.....
004150	00	83	C4	04	FF	76	0A	9A-00	00	00	00	83	C4	02	8B	^.....W..v.....
004160	7E	0E	81	C7	F1	00	57	FF-76	0C	9A	00	00	00	00	83	...v.....WV..
004170	C4	04	FF	76	0A	9A	00	00-00	00	83	C4	02	57	56	9A	.....VH...V)
004180	00	00	00	00	8F	9C	C0	00-CF	AE	56	48	CF	A4	56	29	..VH..V)..(VH..hV)
004190	CF	99	56	48	CF	86	56	29-CF	7B	56	48	CF	6B	56	29	..jVH..QV)..L...CVH..
0041A0	CF	5D	56	48	CF	4F	56	29-C7	4C	9F	CF	43	56	48	CF	9V)..6...-VH.*...!
0041B0	39	56	29	C7	36	9F	CF	2D-56	48	C7	2A	9F	C7	21	9F	..V).....VH.....
0041C0	CF	18	56	29	C7	15	9F	CF-0C	56	48	C7	08	9F	C7	00	...V).....VH.....
0041D0	9F	CE	F7	56	29	C6	F4	9F-CE	EB	56	48	C6	EB	9F	C6	....V...V>.....V
0041E0	E4	9F	CE	05	56	1D	CE	CA-56	3E	CA	C0	9D	CE	99	56	!..V/.gV/.V!..V
0041F0	21	86	83	56	2F	86	67	56-2F	CE	16	56	21	86	00	56	/..V/.V!..zV-..V
004200	2F	85	E4	56	2F	CD	90	56-21	85	7A	56	2D	85	5E	56	-..V!..V-..V-...
004210	2D	CD	0A	56	21	84	F4	56-2D	84	DB	56	2D	C8	9C	9D	

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004220	CC	8B	56	4B	C4	78	9D	CC-6F	56	4B	C4	5D	9D	2C	54	..VK.x..oVK.J..T
004230	56	4B	C4	42	9D	CC	39	56-4B	C4	28	9D	C8	22	9D	CC	VK.B..9VK.(..".
004240	17	56	49	CC	0A	56	4B	CF-A0	9C	00	01	20	23	83	C4	.VI..VH.....#..
004250	04	FF	76	0A	9A	00	00	00-00	83	C4	02	8B	46	0A	A3	..v.....F..
004260	16	00	8B	46	0C	A3	12	00-8B	46	0E	A3	14	00	1F	5E	...F.....F.....^
004270	5F	C9	CB	90	C8	00	00	00-1E	BB	00	00	8E	D8	FF	76	.....v
004280	08	6A	01	9A	00	00	00	00-83	C4	04	6A	01	9A	00	00	.j.....j....
004290	00	00	83	C4	02	83	7E	06-01	75	1C	FF	36	1A	00	FF	.....~.u..6...
0042A0	36	1B	00	9A	00	00	00	00-83	C4	04	FF	36	1C	00	9A	e.....e...
0042B0	00	00	00	00	83	C4	02	FF-76	0E	FF	76	0C	9A	00	00	.....v..v....
0042C0	00	00	83	C4	04	FF	76	0A-9A	00	00	00	00	83	C4	02	.....v.....
0042D0	8B	46	0A	A3	1C	00	8B	46-0C	A3	18	00	8B	46	0E	A3	.F.....F.....F..
0042E0	1A	00	1F	C9	CB	9C	4E	9C-3B	00	C4	92	9F	C4	8C	9F	.....N.....
0042F0	C4	8A	9F	0C	7B	56	29	CC-70	56	4B	CC	62	56	29	C4	....(V)..oVH.bV)..
004300	5F	9F	0C	56	56	4B	C4	53-9F	C4	4F	9F	0C	40	56	1D	...oVH.S..D..@v.
004310	CC	36	56	3E	C8	2C	9D	C4-1E	9F	C4	1B	9F	C4	12	9F	..oV.....
004320	CC	07	56	2F	BC	BA	02	00-00	74							..V).....t
004320	CC	07	56	2F	BC	BA	02	00-00	74							..V).....t

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0005D0	7E 07 C7 46 9A FF 00 EB-0B 83 7E 94 00 7D 05 C7	^..F.....~..3..
0005D0	46 94 00 00 8B 46 F6 03-46 F0 3E 46 08 7D 05 C7	F....F..F..F.3..
0005E0	46 94 7F 00 C4 5E F2 8A-46 94 26 88 07 83 46 F8	F...^..F.&...F.
0005F0	02 83 46 F2 02 FF 4E 8E-75 92 80 46 8D 04 46 81	..F...N.u..F..F.
000600	FE DF 01 7F 03 E9 5D FF-6A 00 9A 00 00 00 00 83	.....I.j.....
000610	C4 02 6A 01 6A 02 9A 00-00 00 00 87 C4 08 6A 0E	..j.j.....j.
000620	6A 03 6A FF 6A 01 9A 00-00 00 00 87 C4 08 6A 0E	j.j.j.....j.
000630	6A 03 6A 01 6A 01 9A 00-00 00 00 83 C4 08 6A 0E	j.j.j.....j.
000640	6A 01 6A FF 6A 02 9A 00-00 00 00 83 C4 08 6A 0E	j.j.j.....j.
000650	6A 01 6A 02 6A 02 9A 00-00 00 00 83 C4 08 6A 0E	j.j.j.....j.
000660	6A 03 6A FF 6A 03 9A 00-00 00 00 87 C4 08 6A 0E	j.j.j.....j.
000670	00 00 00 00 2F 4E 7E 8E-8E 9E 0E 0E 0E 2E 00	.....F..V...3..+
000680	8E 4E 7E 8E 4E 9E FF 7E-8E 9E 0E 0E 0E 2E 00	.....F..V...u..V
000690	00 03 C4 0E 8E 4E 9A 8E-9A 00 00 00 00 83 C4 08	.....V.....
0006A0	9E 7E 7E 9E 1E 8E 0E 00-9A 00 00 00 00 83 C4 08	+...V...V...
0006B0	2E 00 1E 8E 5E 2E 0E FF-7E 0E 9E 7E 0E 9A 00 00	.....V.....
0006C0	00 00 2E 0E 04 FF 7E 9E-FF 7E 9A 9A 00 00 00 00	.....V.....
0006D0	5E 04 0E FF 7E 9E FF 7E-9A 9A 00 00 00 00 83 C4	.....V.....
0006E0	04 0E 8E 00 00 9A 00 00-00 00 9A 00 00 00 00 9A	.....V.....
0006F0	00 00 00 00 8E 01 00 1E-5E 5E 0E 1E 9E 0E 0E 8E	...V...V...V...V
000700	00 0E F5 5E 04 0E 0E 0E 3E-03 0E 0E 3E 0E 0E 4E 5E	...V...V...V...V
000710	0A 0E 0F 5E 0E 0E 0E 0E 5E-0E 0E 0E 1E 0E 0E 1E	.....V...tV...1V.
000720	1E 0E AB 9D 0E 9E 5E 0E-0E 7A 5E 1E 0E 0E 0E 1E	..V...LV...<V...V.
000730	0E 5E 5E 1E 0E 4E 5E 1E-0E 3E 5E 1E 0E 0E 0E 1E	..V...V...tV...V.
000740	0E 1E 5E 1E 0E 1E 5E 1E-0E 7A 5E 1E 0E 0E 0E 1E	..RV...CV...3V...#V.
000750	0D 5E 5E 1E 0E 4E 5E 1E-0E 3E 5E 1E 0E 0E 0E 1E	..V...V...V.....
000760	0D 1E 5E 1E 0D 0E 5E 0E-0E FA 5E 1A C4 F2 9E 84	..V...V...V...V..
000770	E6 5E 0E 0E 0E 5E 04 0E-0E 5E 0E 0E 0E 0E 0E 0E	..V...V...V...V..
000780	0E 5E 1E 0E 0E 9D 0E 0E-9D C4 81 9D 0E A8 5E 07	..V.....V.....
000790	C4 A5 9F C4 9E 9D 0E 9E-9D C4 9C 9D 0E 87 5E 11	.....V.....V..
0007A0	C4 8D 9D C4 7E 9F 0E 7E-5E 11 C4 8C 9D C4 8E 9F	.....V...i...h.
0007B0	0E 5F 5E 11 C4 5E 9D C4-5A 9F C4 4E 9F 0E 4E 5E	..V...X...T...N..EV
0007C0	1E C4 4E 9F 0E 3E 5E 0E-0E 3E 9F 0E 2E 5E 1E C4	..B...9V...6...V..
0007D0	2E 5E 1E 0E 2E 9D 0E 0E-9D AB 8A 0E 00 00 7A	XV.. .....t
0007D0	2E 5E 1E 0E 2E 9D 0E 0E-9D AB 8A 0E 00 00 7A	XV.. .....t

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000000	80	08	00	06	70	63	68	67-2E	63	3F	88	07	00	00	00	....pchg.c?.....
000010	4D	53	20	43	6E	88	09	00-00	9F	4C	4C	49	42	43	45	MS Cn.....LLIBCE
000020	25	88	06	00	00	9D	32	6C-4F	EB	88	06	00	00	A1	01	%.....210.....
000030	43	56	37	96	32	00	00	06-44	47	52	4F	55	50	09	50	CV7.2...DGROUP.P
000040	43	48	47	5F	54	45	58	54-04	43	4F	44	45	05	5F	44	CHG_TEXT.CODE._D
000050	41	54	41	04	44	41	54	41-05	43	4F	4E	53	54	04	5F	ATA.DATA.CONST._
000060	42	53	53	03	42	53	53	15-98	07	00	48	02	03	03	04	BSS.BSS....H....
000070	01	0C	98	07	00	48	40	01-05	06	01	CC	98	07	00	48	.....H0.....H
000080	00	00	07	07	01	0A	98	07-00	48	46	00	08	09	01	01	.....HF.....
000090	5A	08	00	01	FF	03	FF	04-FF	02	56	9C	0D	00	00	03	.....V.....
0000A0	01	02	02	01	03	04	40	01-43	01	00	3C	5E	00	04	5F	.....9.E.....
0000B0	5F	61	63	72	74	75	73	65-64	00	12	5F	63	6C	65	61	_actused..._clea
0000C0	72	5F	61	63	74	69	6F	6E-5F	61	72	65	61	00	10	5F	r_action_area...
0000D0	63	6C	65	61	72	5F	6D	65-6E	75	5F	61	72	65	61	00	clear_menu_area.
0000E0	13	5F	63	6C	65	61	72	5F-6D	65	73	73	61	67	65	5F	._clear_message.
0000F0	61	72	65	61	00	14	5F	77-72	69	74	65	5F	61	6C	6C	area..._write_all
000100	5F	73	74	61	6E	64	61	72-64	73	00	16	54	08	00	08	_standards.....
000110	62	75	69	6C	64	70	74	72-00	D3	9C	0C	00	09	5F	75	buildptr....._u
000120	6E	73	6E	74	5F	77	6E	00-8D	84	1F	00	16	73	68	6F	nset_wn....._no
000130	77	5F	63	64	65	6E	74	69-66	5F	65	12	5F	77	69	6E	w_identifier_wi
000140	64	6F	77	00	E3	8C	03	01-10	5F	70	75	74	5F	70	63	ow....._put_pc
000150	68	67	5F	76	61	6C	75	65-73	00	0F	5F	72	65	6D	6F	ng_values..._remo
000160	76	65	5F	77	69	6E	64	6F-77	73	00	15	5F	63	6C	6F	ve_windows..._clo
000170	73	65	5F	73	74	61	6E	64-61	72	64	73	5F	66	69	6C	se_standards_fil
000180	65	00	08	5F	64	65	66	73-3F	77	6E	00	05	5F	70	63	e..._defn_wn..._pc
000190	58	67	00	0E	5F	67	65	74-5F	73	74	61	6E	64	61	72	ng..._get_standar
0001A0	64	73	00	0C	5F	73	65	74-5F	6D	65	73	73	61	67	65	ds..._set_message
0001B0	00	11	5F	73	65	74	5F	73-63	72	65	65	6E	5F	74	69	.._set_screen_ti
0001C0	74	6C	65	00	07	5F	76	5F-70	6C	73	74	00	08	5F	62	tle..._v_plst..._b
0001D0	64	72	5F	64	6C	6E	00	0B-5F	69	6D	5F	6F	75	74	6D	dr_dln..._im_outm
0001E0	6F	64	65	00	0B	5F	69	6D-5F	5F	75	74	70	61	74	68	ode..._im_outoath
0001F0	00	0E	5F	69	6D	5F	69	6E-74	65	72	69	6D	61	67	65	.._im_interimage
000200	00	0A	5F	69	6D	5F	6F	70-6D	6F	64	65	00	0A	5F	69	.._im_opmode..._i
000210	6D	5F	63	70	75	77	69	6E-00	13	5F	67	65	74	5F	65	m_cpuwin..._get_e
000220	78	70	65	72	69	6D	65	6E-74	5F	6B	65	79	00	07	5F	xperiment_key..._
000230	65	72	72	6D	73	67	00	05-5F	73	70	72	69	6E	74	66	errmsg..._sprintf
000240	00	07	5F	73	65	74	5F	77-6E	00	82	86	29	00	00	01	..._set_wn....)
000250	08	62	75	69	6C	64	70	74-72	00	00	00	16	73	68	6F	..buildptr...._sho
000260	77	5F	69	64	65	6E	74	69-66	69	65	72	5F	77	69	6E	w_identifier_wi
000270	64	6F	77	1E	00	00	44	90-1F	00	00	01	0F	5F	72	65	dow...D....._re
000280	6D	6F	76	65	5F	77	69	6E-64	6F	77	73	96	00	00	05	move_windows....
000290	5F	70	63	68	67	B8	00	00-96	B8	04	00	00	A2	01	D1	_pchg.....
0002A0	A0	02	01	02	02	00	20	20-20	20	20	20	20	20	20	20	.....
0002B0	20	50	20	20	43	20	20	48-20	20	47	20	20	20	20	20	P C H G
0002C0	20	20	20	20	20	20	20	20-00	43	61	6C	63	75	6C	61	..Calcula
0002D0	74	69	6E	67	20	70	65	72-63	65	6E	74	20	63	68	61	ting percent cha

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0002E0	6E 67 65 20 67 6D 61 67-65	20 20 00 75 73-69 6E	nge image .usin
0002F0	67 20 69 6E 74 65 67 65-72	20 6E 75 6D 62 65 72	g integer number
000300	20 61 72 69 74 68 6D 65-74	69 63 2E 20 20 00 42	arithmetic. .B
000310	69 6F 6C 6F 67 69 63 61-6C	20 56 69 73 69 6F 6E	iological Vision
000320	20 20 20 50 43 48 47 20-2D	20 50 65 72 63 65 6E	PCHG - Percen
000330	74 20 63 68 61 6E 67 65-20	62 65 74 77 65 65 6E	t change between
000340	20 32 20 69 6D 61 67 65-73	00 53 63 61 6C 65 20	2 images.Scale
000350	3D 20 25 64 20 20 20 43-6C	69 70 20 3D 20 25 64	= %d Clip = %d
000360	20 20 20 4F 66 66 73 65-74	20 2D 20 25 64 00 50	Offset = %d.P
000370	43 45 47 3A 20 43 61 6E-27	74 20 61 63 63 65 73	CHG: Can't acces
000380	73 20 73 74 61 6E 64 61-72	64 73 20 69 6E 66 6F	s standards info
000390	72 6D 61 74 69 6F 6E 20-66	6F 72 20 6B 65 75 20	rmation for key
0003A0	23 6C 61 00 09 60 06 00-02	00 00 00 00 58 A0 44	Xld.....A.D
0003B0	00 02 00 01 43 6F 70 75-72	69 67 68 74 20 2B 63	....Copyright (c
0003C0	25 20 31 39 38 39 2C 2C-42	69 6F 6C 6F 67 69 63	) 1989. Biologic
0003D0	61 6C 20 56 69 73 69 6F-6E	20 49 6E 63 2E 20 20	al Vision Inc.
0003E0	41 6C 6C 20 72 69 67 68-74	73 20 72 65 73 65 72	All rights reser
0003F0	76 65 64 00 66 40 06 03-01	00 00 08 00 00 00 1E	ved.....
000400	58 00 00 8E D8 C4 5E 06-8D	45 0A 25 89 47 02 8B	.....F.&G..
000410	46 0C 26 8F 07 1F 09 CB-70	1E 22 00 00 8E D8 B8	F.&.....
000420	00 00 5A 00 00 52 50 6A-26	6A 05 6A 04 6A 03 1E	.....RF&j.j.j..
000430	69 00 00 9A 00 00 00 00-83	C4 10 1E 68 00 00 9A	h.....n...
000440	00 00 00 00 83 C4 04 C7-06	42 00 01 00 1E 68 00	.....B....h.
000450	00 1E 6E 02 00 6A 01 6A-01	9A 00 00 00 00 B3 C4	..h..j.j.....
000460	0C 1E 68 00 00 1E 68 25-00	6A 01 6A 02 9A 00 00	..h...n3.j.j....
000470	00 00 83 C4 0C 1E 68 00-00	1E 65 48 00 6A 01 6A	.....h...hH.j.j
000480	03 9A 00 00 00 00 83 C4-0C	C7 06 00 00 01 00 1F	.....
000490	CB 1E B8 00 00 8E D8 63-3E	00 00 00 74 0C 1E 68	.....>...t.h
0004A0	00 00 9A 00 00 00 00 83-C4	04 C7 06 00 00 00 00	.....
0004B0	1F CB 70 CE 74 00 00 57-56	1E B8 00 00 8E D8 C7	....t..WV.....
0004C0	46 7E 7F 00 1E 68 6B 00-9A	00 00 00 83 C4 04	F...hk.....
0004D0	9A 00 00 00 00 9A 00 00-00	00 9A 00 00 00 00 0E	.....
0004E0	E8 00 00 6A 7F FF 76 08-FF	76 06 1E 68 A6 00 8D	...j.v..v..h...
0004F0	46 A0 16 50 9A 00 00 00-00	B3 C4 0E 8D 46 A0 16	F..F.....F..
000500	50 6A 01 9A 00 00 00 00-83	C4 06 6A 01 9A 00 00	Fj.....j....
000510	00 00 83 C4 02 6A 00 6A-02	6A FF 6A 01 9A 00 00	.....j.j.j.j....
000520	00 00 83 C4 08 6A 08 6A-02	6A 01 6A 01 9A 00 00	.....j.j.j.j....
000530	00 00 83 C4 08 6A 00 6A-00	6A FF 6A 01 9A 00 00	.....j.j.j.j....
000540	00 00 83 C4 08 C7 46 FA-00	D0 6A 01 9A 00 00 00	.....F...j....
000550	00 83 C4 02 6A 04 6A 00-9A	00 00 00 83 C4 04	....j.j.....
000560	2B F6 89 76 8C 8B C6 C1-FB	06 89 46 92 50 9A 00	+..v.....F.P..
000570	00 00 00 83 C4 02 8B 46-8C	89 46 FB 8B 56 FA 40	.....F..F..V.@
000580	89 46 F2 89 56 F4 BF 00-02	89 7E 8E C4 5E FB 26	..F..V.....~..^..&
000590	8A 07 98 89 46 F6 C4 5E-F2	26 8A 07 98 89 46 F0	....F..^..&....F.
0005A0	2B 46 F6 F7 6E 06 99 8B-4E	F6 3B 4E F0 7E 03 8B	+F..n...N.:N..~..
0005B0	4E F0 80 C9 01 F7 F9 05-7F	00 89 46 94 3D FF 00	N.....F.=..

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000E60	BA	00	20	C7	C4	C4	C4	C4-C4	C4	C4	C4	C4	C4	C4	C4	..	.....
000E70	C4	C5	C4	C4	C4	C4	C4	C4-C4	C4	C4	C4	C4	C4	C4	C4	B3	.....
000E80	20	52	61	64	69	75	73	3D-20	25	33	64	20	BA	00	20		Radius= %3d ..
000E90	BA	20	20	25	36	64	20	20-20	20	20	B3	20	20	25	36		. %6d . %6
000EA0	64	25	25	20	20	20	20	B3-20	58	20	20	20	20	20	3D		d%% . X =
000EB0	20	25	33	64	20	BA	00	20-BA	20	20	20	20	28	25	36		%3d .. (%6
000EC0	64	29	20	B3	20	20	20	28-25	36	64	29	20	20	B3	20		d) . (%6d) .
000ED0	59	20	20	20	20	20	3D	20-25	33	64	20	BA	00	20	C8		Y = %3d ..
000EE0	CD	CD	CD	CD	CD	CD	CD	CD-CD	CD	CD	CD	CD	CF	CD	CD		.....
000EF0	CD	CD	CD	CD	CD	CD	CD	CD-CD	CD	CD	CF	CD	CD	CD	CD		.....
000F00	CD	CD	CD	CD	CD	CD	CD	CD-CD	BC	00	43	68	65	63	68		.....Check
000F10	20	70	72	69	6E	74	65	72-20	73	74	61	74	75	73	2C		printer status.
000F20	20	70	72	65	73	73	20	49-20	74	6F	20	69	67	6E	6F		press I to igno
000F30	72	65	20	69	74	2C	20	43-20	74	6F	20	63	6F	6E	74		re it. C to cont
000F40	69	6E	75	65	2E	00	50	52-4E	00	2A	2A	2A	2A	20	43		inue..PRN.*** C
000F50	61	6E	20	6E	6F	74	20	6F-70	65	6E	20	64	65	76	69		an not open devi
000F60	63	65	20	4C	69	6E	65	20-50	72	69	6E	74	65	72	20		ce Line Printer
000F70	2A	2A	2A	2A	00	20	20	20-20	50	4F	53	49	54	45	4F		***. POSITIO
000F80	4E	00	20	20	20	20	43	4F-4E	54	52	4F	4C	00	20	20		N. CONTROL.
000F90	20	20	20	20	20	20	45	58-50	45	52	49	4D	45	4E	54		EXPERIMENT
000FA0	00	20	20	20	20	20	20	44-49	46	46	45	52	45	4E	43		. DIFFERENC
000FB0	45	00	20	20	20	20	35	25-43	48	41	4E	47	45	0A	00		E. %CHANGE..
000FC0	25	32	64	25	73	20	20	20-25	73	2C	25	73	25	31	31		%2d%s %s.%s%11
000FD0	64	25	31	36	64	25	31	36-64	25	31	33	64	00	25	72		d%16d%16d%13d.%s
000FE0	20	25	73	25	34	64	25	34-64	25	35	64	25	35	64	00		%s%4d%4d%5d%5d.
000FF0	4B	A0	2B	00	02	70	0A	43-4F	4E	54	52	4F	4C	00	45		K.+..p.CONTROL.E
001000	58	50	45	52	49	4D	45	4E-54	00	44	49	46	46	43	52		XPERIMENT.DIFFER
001010	45	4E	43	45	00	25	20	43-48	41	4E	47	45	00	E1	A0		ENCE.% CHANGE...
001020	0A	00	02	00	00	00	00	00-00	01	00	53	A0	06	00	02		.....S....
001030	D4	00	FF	FF	86	A0	C2	00-02	3A	03	43	6F	70	79	72		.....Copyr
001040	69	67	68	74	20	28	63	29-20	31	39	38	39	2C	20	42		ight (c) 1989, B
001050	69	6F	6C	6F	67	69	63	61-6C	20	56	69	73	69	6F	6E		iological Vision
001060	20	49	6E	63	2E	20	20	41-6C	6C	20	72	69	67	68	74		Inc. All right
001070	73	20	72	65	73	65	72	76-65	64	00	00	00	00	00	00		s reserved.....
001080	00	0C	00	00	00	15	00	00-00	25	00	00	00	3F	00	00		.....%...?..
001090	00	61	00	00	00	B1	00	00-00	B1	00	00	00	DD	00	00		.a.....
0010A0	00	15	01	00	00	5D	01	00-00	9F	01	00	00	E9	01	00		.....J.....
0010B0	00	39	02	00	00	91	02	00-00	ED	02	00	00	4D	03	00		.9.....M..
0010C0	00	BD	03	00	00	31	04	00-00	A9	04	00	00	21	05	00		.....l.....!
0010D0	00	A1	05	00	00	2D	06	00-00	C5	06	00	00	55	07	00		.....-.....U..
0010E0	00	E9	07	00	00	A1	08	00-00	41	09	00	00	F9	09	00		.....A.....
0010F0	00	A5	0A	00	00	5D	0B	00-00	4B	A0	34	00	02	CA	07		.....J...H.4....
001100	AF	07	00	00	B1	07	00	00-B3	07	00	00	B5	07	00	00		.....
001110	B7	07	00	00	B9	07	00	00-BB	07	00	00	BD	07	00	00		.....
001120	BF	07	00	00	C1	07	00	00-C4	07	00	00	C7	07	00	00		.....
001130	4A	9C	25	00	CC	2C	9D	CC-28	9D	CC	24	9D	CC	20	9D		J.%...(.\$. .

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001140	CC 1C 9D CC 18 9D CC 14-9D CC 10 9D CC 0C 9D CC	.....K.\$.....
001150	08 9D CC 04 9D CC 00 9D-4B A0 24 00 02 0A 08 FA	.....
001160	07 00 00 FC 07 00 00 FE-07 00 00 00 08 00 00 02	.....
001170	08 00 00 04 08 00 00 06-08 00 00 08 08 00 00 E3	.....
001180	9C 19 00 CC 1C 9D CC 18-9D CC 14 9D CC 10 9D CC	.....
001190	0C 9D CC 08 9D CC 04 9D-CC 00 9D 93 A0 20 00 02	.....
0011A0	54 0A 00 00 00 00 01 00 00-00 01 00 00 00 00 F0 00	T.....
0011B0	F0 00 00 00 00 00 00 00-03 00 01 00 01 00 F9 A0	.....
0011C0	06 00 02 9B 0A 01 00 B5-A0 9E 00 01 00 00 08 08	..WV.....
0011D0	00 00 57 56 1E B8 00 00-8E D8 EB 05 9A 00 00 00	.....u..v..v..
0011E0	00 9A 00 00 00 00 08 C0-75 F2 FF 76 06 FF 76 06	.....+..+..F..
0011F0	9A 00 00 00 00 00 E3 C4 04-2B F6 2E FF 8A 46 0C 98	..F..F..F.....
001200	87 46 FA 8A 46 0A 98 89-46 F8 3A 00 00 00 00 8B	.....t..D.....
001210	F0 F6 84 01 00 02 74 06-8D 44 E0 EB 03 90 8E C6	..:v..t..v..u....
001220	8B F0 3B 76 F8 74 05 3B-76 FA 75 03 BF 01 00 08	..t..v..v.....F
001230	FF 74 D7 89 7E FC 89 76-FE 9A 00 00 00 00 8A 46	..:u.....
001240	0A 98 3B C6 75 0A C6 06-04 00 01 1F 5E 5F C9 EB	.....
001250	C6 06 04 00 00 01 1F 5E 5F-C9 CB 1E B8 00 00 8E DB	.....
001260	C6 06 04 00 01 1F CB 90-1F 9C 2B 00 C4 3A 7D C2	.....z..1V..EV..
001270	8E 9D C4 84 9D C4 7A 9D-CC 6C 56 0C C4 4E 56 0D	..=V7..#VY..V1..V7
001280	CC 3D 56 37 CC 23 56 59-CC 14 56 3B CC 0F 56 37	.....K....
001290	C8 08 9D 14 A0 06 00 03-00 00 00 00 57 9C 05 00	..V#.....
0012A0	C8 00 56 23 1E A0 D8 00-01 9A 00 C8 00 00 00 1E	.....u'..>
0012B0	B8 00 00 8E DB A1 00 00-0B 06 02 00 75 27 B0 3E	..u.....B.....
0012C0	05 00 00 75 1A FE 06 05-00 1E 68 06 00 9A 00 00	.....
0012D0	00 00 83 C4 04 9A 00 00-00 00 9A 00 00 00 00 2B	.....F.&....
0012E0	C0 1F C9 CB 90 BE 06 00-00 8B 46 06 26 A3 00 00	..F.&....F..V.&..
0012F0	8B 46 08 26 A3 02 00 8B-46 0A 8B 56 0C 26 A3 04	..&....F..V.&..
001300	00 26 89 16 06 00 8B 46-0E 8B 56 10 26 A3 08 00	.....>...33..6..
001310	26 89 16 0A 00 B3 3E D4-00 00 7D 33 FF 36 02 00	..o.....RF....
001320	FF 36 00 00 B8 00 00 BA-00 00 52 50 9A 00 00 00	.....u..hL.....
001330	00 83 C4 08 0B C0 75 0F-1E 68 4C 00 9A 00 00 00	.....*
001340	00 83 C4 04 EB 99 90 C7-06 D4 00 01 00 EB 2A FF	6.....6...6...
001350	36 D4 00 FF 06 D4 00 FF-36 02 00 FF 36 00 00 B8	.....RP.....
001360	00 00 BA 00 00 52 50 9A-00 00 00 00 B3 C4 0A 0B	..u..h.....
001370	C0 75 06 1E 68 90 00 EB-C3 B8 01 00 1F C9 CB 81	..t.....VW..V#..
001380	9C 74 00 C4 CA 9D CC BD-56 57 C8 B8 56 23 C4 B5	V#.....
001390	56 23 C4 B2 9D C4 AE 9D-C4 AA 9D C4 A6 9D C4 9E	...V.....VM.3V#
0013A0	9D CC 92 56 1C C4 8F 9D-CC 82 56 4D C8 7D 56 23	..zV#.w..s..1..hV
0013B0	C4 7A 56 23 C4 77 9D C4-73 9D C4 6C 9D C4 68 56	#..cV#.YV#.TV#.JV
0013C0	23 C4 63 56 23 C4 59 56-23 C4 54 56 23 C4 4A 56	#..CV#..<..OV...+V7
0013D0	23 C4 43 56 23 C4 3C 9C-CC 30 56 0C CC 2B 56 37	..#VY.....
0013E0	CC 23 56 59 C4 20 9D C4-1C 9D C4 15 9D C4 0F 9D	.....0.....@
0013F0	C4 0B 9D C8 06 9D B8 A0-30 00 03 02 00 00 00 40	@.....@.....@
001400	40 00 00 00 00 00 00 00-00 00 00 00 00 00 F0	@.....@.....
001410	40 00 00 00 00 00 00 00-40 00 00 00 00 00 F0	@.....@.....

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001420	3F 00 00 00 00 00 00 E0-3F	BE A0 B7 03 01 6E 01	?.....?.....n.
001430	C8 8C 0D 00 57 56 1E B8-00	00 BE D8 C7 B6 BA F6	....WV.....
001440	00 00 C7 B6 4C F7 00 00-C7	B6 EA F6 80 00 C7 B6	....L.....
001450	DC F6 78 00 C7 B6 BC F6-02	00 C7 B6 C0 F6 00 00	..x.....
001460	C7 B6 D6 F6 00 00 C7 46-A4	01 00 C7 B6 C2 F6 00	.....F.....
001470	00 C7 B6 A0 F2 01 00 C7-B6	EC F6 FF 00 C7 B6 A2	.....
001480	F2 00 00 C7 B6 E0 F6 7E-00	C7 B6 D8 F6 76 00 C7	.....v.....
001490	B6 DA F6 80 00 C7 B6 CC-F6	78 00 C7 B6 54 F7 0A	.....x...T..
0014A0	00 C7 46 C2 00 00 C7 B6-EE	F6 00 00 C7 46 AC 14	..F.....F..
0014B0	00 68 00 03 68 00 D0 9A-00	00 00 00 B3 C4 04 6A	..h..h.....j
0014C0	00 6A 02 9A 00 00 00 00-83	C4 04 6A 01 6A 01 6A	..j.....j..j..
0014D0	00 9A 00 00 00 00 B3 C4-06	6A 01 6A 01 9A 00 00	.....j..j....
0014E0	00 00 B3 C4 04 6A 00 6A-01	9A 00 00 00 00 B3 C4	.....j..j....
0014F0	04 C7 06 B4 00 FF FF 0E-E8	00 00 C7 B6 C4 F6 00	.....
001500	00 C7 B6 C6 F6 01 01 C7-B6	C8 F6 00 00 C7 B6 CA	.....
001510	F6 01 01 C7 B6 B0 F6 F1-00	C7 B6 B2 F6 F1 00 C7	.....
001520	B6 B4 F6 00 00 C7 B6 B6-F6	00 00 C7 46 BA 00 00	.....F....
001530	C7 46 BC 01 00 C7 46 BE-02	00 C7 46 C0 03 00 1E	..F....F....F....
001540	68 D6 00 9A 00 00 00 00-83	C4 04 6A 00 0E E8 00	h.....j....
001550	00 B3 C4 02 9A 00 00 00-00	0B D2 7F 1B 7C 05 3D	.....i.=
001560	00 04 73 14 1E 68 0F 01-9A	00 00 00 00 B3 C4 04	..s..h.....
001570	2B C0 1F 5E 5F C9 CB 90-9A	00 00 00 00 9A 00 00	+..^.....
001580	00 00 0B D2 7F 0E 7C 05-3D	22 01 73 07 1E 68 36	.....l.="s..h6
001590	01 EB D6 70 FF B6 54 F7-FF	B6 C2 F6 FF 76 A4 0E	.....T.....v..
0015A0	E8 00 00 B3 C4 06 1E 68-61	01 6A 00 9A 00 00 00	.....ha..j....
0015B0	00 B3 C4 06 C7 B6 A6 F4-01	00 BB BE A6 F4 BB F1	.....
0015C0	8B C1 88 B2 A7 F4 C6 B2-AB	F4 FF BB B2 A3 F2 C6	.....
0015D0	B2 A4 F2 00 B3 C1 02 81-F9	FF 00 7E E1 89 BE A6	.....^.....
0015E0	F4 6A 00 9A 00 00 00 00-83	C4 02 BD B6 A4 F2 16	..j.....
0015F0	50 8D 86 A4 F2 16 50 8D-86	AB F4 16 50 68 00 01	P.....P.....Ph..
001600	6A 00 6A 00 6A 01 9A 00-00	00 00 B3 C4 14 6A 00	j..j..j.....j..
001610	6A 02 9A 00 00 00 00 B3-C4	04 6A 00 9A 00 00 00	j.....j.....
001620	00 B3 C4 02 FF B6 EC F6-9A	00 00 00 00 B3 C4 02	.....
001630	6A 01 68 FE 00 6A 06 FF-76	BC FF 76 BC 9A 00 00	j..h..j..v..v....
001640	00 00 B3 C4 0A 6A 01 68-FE	00 6A 06 FF 76 BE FF	.....j..h..j..v..
001650	76 BE 9A 00 00 00 00 B3-C4	0A 6A 01 68 FE 00 6A	v.....j..h..j
001660	06 FF 76 C0 FF 76 C0 9A-00	00 00 00 B3 C4 0A 6A	..v..v.....j
001670	00 FF 76 BA 9A 00 00 00-00	B3 C4 04 9A 00 00 00	.....
001680	00 A3 00 00 89 16 02 00-0B	D2 7F 0E 7C 04 0B C0	.....l....
001690	75 0B 2B C0 A3 02 00 A3-00	00 FF 36 02 00 FF 36	u.+.....6...6
0016A0	00 00 9A 00 00 00 00 B3-C4	04 A3 00 00 89 16 02	.....
0016B0	00 1E 68 0E 00 1E 68 0E-00	1E 68 0E 00 1E 68 0E	..h...h...h...h.
0016C0	00 1E 68 0E 00 1E 68 0E-00	1E 68 0C 00 1E 68 0A	..h...h...h...h.
0016D0	00 1E 68 0B 00 1E 68 06-00	9A 00 00 00 00 B3 C4	..h...h.....
0016E0	28 0B C0 75 24 1E 68 7F-01	9A 00 00 00 00 B3 C4	(..u#..h.....
0016F0	04 C7 06 06 00 00 00 C7-06	0B 00 00 00 C7 06 0A	.....

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001700	00 2B 00 C7 06 0C 00 3C-00 83 3E 06 00 00 75 3B	.+.....<...>...u:
001710	83 3E 08 00 00 75 34 83-3E 0A 00 00 75 2D 83 3E	.>...u4.>...u->
001720	0C 00 00 75 26 1E 68 A6-01 6A 00 9A 00 00 00 00	...u&.h...i.....
001730	83 C4 06 C7 06 06 00 00-00 C7 06 08 00 00 00 C7	.....
001740	06 0A 00 2B 00 C7 06 0C-00 3C 00 8D 86 F0 F6 16	...+.....<.....
001750	50 8D 86 56 F7 16 50 9A-00 00 00 00 83 C4 08 0B	P..V..P.....
001760	D0 75 14 9B D9 EE 9B D9-9E 58 F7 9B D9 06 02 00	.u.....V.....
001770	9B D9 9E F0 F6 90 9B 8D-46 B2 16 50 8D 46 C4 16	.....F..P.F..
001780	50 9A 00 00 00 00 83 C4-08 9B D9 86 F0 F6 9B DC	P.....
001790	16 06 00 9B DD D8 9B DF-E0 9E 75 0A 9B D3 06 02	.....u.....
0017A0	00 9B D9 9E F0 F6 9B D9-86 F0 F6 9B DC 16 06 00	.....
0017B0	9B DD D8 9B DF E0 9E 72-13 9B D9 86 F0 F6 9B D8	.....F.....
0017C0	26 56 F7 9B DD D8 9B DF-E0 9E 73 0A 9B D9 06 02	.V.....E.....
0017D0	00 9B D9 9E F0 F6 9B D9-46 C4 9B D8 4E B2 9B D9	.....F...N...
0017E0	9B A8 F6 10 9C 5A 01 C7-AE 56 05 C7 AA 56 05 C7	.....2...V...V...
0017F0	A8 56 05 C7 A1 56 05 C7-9F 9C C7 9C 56 05 C7 96	.V...V...V...V...
001800	56 05 C7 93 56 05 C7 8E-56 05 C7 89 56 05 C7 83	V...V...V...V...
001810	51 05 C7 80 56 05 C7 7E-9C C7 7B 56 05 C7 76 56	...aV...a...iV...+V...
001820	05 C7 71 56 05 C7 6F 9C-C7 6C 56 05 C7 66 56 05	.cv...a...V...V...
001830	C7 63 56 05 C7 61 9C C7-5E 56 05 C7 3E 9C C7 3B	RV...EV...@V...A...
001840	52 56 0B C7 45 56 06 C7-40 56 05 C7 3E 9C C7 3B	V...6V...3V...V+...
001850	56 05 C7 36 56 05 C7 33-56 05 CF 28 56 2A C7 17	.....V%...
001860	9F C7 11 9F C7 0B 9F C7-05 9F CE FC 56 25 C6 F7	.....V.....
001870	9D C6 F0 9F C6 E9 9F C6-E2 9F C6 DB 9F C6 D5 9F	.....V.....
001880	C6 CF 9F C6 C9 9F C6 C3-9F CE BA 56 1C C6 B7 9D	..VL.....
001890	CE 4A 56 4C C6 A7 9F C6-A3 9F C6 9F C6 87 9F C6	.....
0018A0	C6 97 9F C6 93 9F C6 8F-9F C6 8B 9F C6 87 9F C6	.....C...=V...p...
0018B0	83 9F C6 7F 9D C6 7B 9D-CE 73 56 1B C6 70 9F C6	1...h...e...V...R...M
0018C0	6C 9F C6 68 9F C6 65 9F-C6 56 9F C6 52 9F CE 4D	V...EV%..BVV.#VV...
0018D0	56 08 CE 45 56 58 CE 38-56 56 CE 23 56 56 CE 0E	VV...VU...VS...V>..
0018E0	56 56 CD F9 56 55 CD ED-56 53 CD E3 56 3E CD D7	VR...VP...V%...x...qV
0018F0	56 52 CD B4 56 50 CD 7D-56 25 C5 78 9D 85 71 56	J...NV=.IVG.9V...
001900	4A C5 5F 9D CD 4E 56 3D-CD 49 56 47 CD 39 56 1C	.6...%V9...VE...V...
001910	C5 36 9D CD 25 56 39 85-1F 56 45 CD 14 56 28 C5	....V.....VC...V
001920	11 9D 84 C9 56 12 C4 C3-9D CC BA 56 43 CC AE 56	A...V6...V>...V<...
001930	41 CC A2 56 40 CC 94 56-3E CC 88 56 3C C8 0B 9D	w....!.....6...
001940	77 A0 B8 03 01 21 05 9B-D9 86 F0 F6 9B DC 36 0E	.....^.....
001950	00 9B D8 B6 A8 F6 9B D9-5E A8 90 9B C7 86 A6 F4	..+.....
001960	00 00 2B C0 B9 00 01 8D-BE A4 F2 16 07 F2 AB 80	.....V...
001970	86 A7 F4 02 BF EF 00 C7-86 98 F2 DE 01 FF 76 C0	j.....P
001980	6A 00 9A 00 00 00 83-C4 04 8D 86 A8 F4 16 50	h.....j.....
001990	68 00 02 FF B6 9B F2 6A-00 9A 00 00 00 83 C4	..F.....
0019A0	0A C7 46 EE 00 00 8D 86-A8 F4 89 86 9A F2 8C 96	..+.....
0019B0	9C F2 2B C9 8C 9E 9E F2-C5 B6 9A F2 8B D9 03 DD	..6.....A.....
0019C0	8A 04 36 8B 87 A4 F2 83-C6 02 41 81 F9 FE 00 7E	.....N...v.j.....
0019D0	EB 8E 9E 9E F2 89 4E EE-FF 76 BA 6A 00 9A 00 00	

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0019E0	00 00 83 C4 04 8D 86 A4-F2 16 50 68 00 02 8D 85	.....Ph.....
0019F0	F0 00 50 6A 00 9A 00 00-00 00 83 C4 0A B3 AE 98	..Pj.....
001A00	F2 02 4F 83 FF 01 7C 03-E9 72 FF 89 BE A6 F4 1E	..D...i...n.....
001A10	68 C8 01 9A 00 00 00 00-83 C4 04 FF 76 BC 6A 00	h.....v.j.
001A20	9A 00 00 00 00 83 C4 04-1E 68 D5 01 9A 00 00 00	.....h.....
001A30	00 83 C4 04 A1 06 00 99-2B C2 D1 F8 89 86 B8 F6	.....+.....
001A40	A1 08 00 99 2B C2 D1 F8-05 F1 00 89 86 AC F6 A1	.....+.....
001A50	0A 00 99 89 04 00 F7 F9-03 86 B6 F6 89 46 D0 6A	.....F.j.
001A60	00 6A 01 9A 00 00 00 00-83 C4 04 6A 00 9A 00 00	.j.....j.....
001A70	00 00 83 C4 02 6A 00 6A-00 9A 00 00 00 00 83 C4	.....j.j.....
001A80	0A FF B6 AC F2 9A 00 00-00 00 83 C4 02 2B F6 A1	.....+.....
001A90	0A 00 99 2B C2 D1 F8 F7-EE 03 46 D0 89 46 A0 56	...+.....F..F.V
001AA0	0E E8 00 00 83 C4 02 BB-D8 8E C2 57 8B FB 89 FF	.....W.....
001AB0	FF 33 C0 F2 AE F7 D1 49-5F 8B F9 56 0E E8 00 00	.3.....1...V.....
001AC0	83 C4 02 52 50 57 57 6A-01 68 FA 00 FF 76 A0 6A	...RPWWj.n...v.j.
001AD0	01 5A 00 9A 00 00 00 00-83 C4 12 46 83 FE 0B 7E	.j.....F.....
001AE0	AE 89 BE 3A F7 89 B6 A6-F4 A1 0C 00 99 B9 04 00	...Z.....
001AF0	F7 F9 8B C8 A1 0B 00 99-2B C2 D1 F8 03 C1 05 F7	.....+.....
001B00	00 89 46 C8 2B F6 A1 0C-00 99 2B C2 D1 F8 F7 EE	..F.+.....+.....
001B10	03 46 C8 89 86 5C F7 56-0E EB 00 00 83 C4 02 8B	.F...V.....
001B20	D8 8E C2 57 8B FB 89 FF-FF 33 C0 F2 AE F7 D1 49	...W.....3.....I
001B30	5F 8B F9 56 0E E8 00 00-83 C4 02 52 50 57 57 6A	...V.....RPWWj
001B40	02 FF B6 5C F7 6A 0B 6A-01 6A 00 9A 00 00 00 00	...V.j.j.j.....
001B50	83 C4 12 46 83 FE 07 7E-AD 89 BE 5A F7 89 B6 A6	...F...^...Z....
001B60	F4 6A 00 6A 02 9A 00 00-00 00 83 C4 04 6A 00 FF	.j.j.....j.....
001B70	76 BA 6A FF FF 76 BA 9A-00 00 00 00 83 C4 08 6A	v.j...v.....j
001B80	00 6A 02 9A 00 00 00 00-83 C4 04 8B 86 EA F6 05	.j.....
001B90	FE 00 89 86 DE F6 8B 86-DC F6 05 EE 00 89 86 D2	.....
001BA0	F6 8B 86 EA F6 99 2B C2-D1 F8 40 89 86 D4 F6 8B	.....+...@.....
001BB0	B6 DC F6 99 2B C2 D1 F8-05 F1 00 89 86 BE F6 FF	.....+.....
001BC0	B6 A0 F2 9A 00 00 00 00-83 C4 02 8B B6 D4 F6 03	.....
001BD0	B6 E0 F6 8B BE BE F6 03-BE D8 F6 57 56 FF B6 BE	.....WV.....
001BE0	F6 FF B6 D4 F6 FF 76 BA-6A 00 9A 00 00 00 00 83	.....v.j.....
001BF0	C4 0C 9B DF 06 0A 00 9B-D9 C0 9B DB BE 8E F2 90	.....
001C00	9B 8B 86 D4 F6 2B 86 B8-F6 89 86 98 F2 9B DF 86	.....+.....
001C10	9B F2 9B DC 0E 16 00 9B-D8 F1 9B D9 9E 4E F7 90	.....N.....
001C20	9B 8B C6 2B 86 B8 F6 89-86 98 F2 9B DF 86 9B F2	.....+.....
001C30	9B DC 0E 16 00 9B D8 F1-9B D9 9E F4 F6 9B DF 06	.....
001C40	0C 00 9B D9 C0 9B DB BE-84 F2 90 9B 8B 86 BE F6	.....
001C50	2B 86 AC F6 89 86 98 F2-9B DF 86 98 F2 9B DC 0E	+.....
001C60	16 00 9B D8 F1 9B D9 9E-F8 F6 90 9B 8B C7 2B 86	.....+.....
001C70	AC F6 89 86 98 F2 9B DF-86 98 F2 9B DC 0E 16 00	.....
001C80	9B D8 F1 9B D9 9E E2 F6-9B D9 86 4E F7 9A 00 00	.....N.....
001C90	00 00 89 46 D2 9B D9 86-F4 F6 9A 00 00 00 00 89	...F.....
001CA0	46 CA 9B D9 86 F8 F6 9A-00 00 00 00 89 46 CC 9B	F.....F.....
001CB0	D9 86 E2 F6 9A 00 00 00-00 89 46 B6 9B DF 46 D2	.....F...F.....

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001CC0	9B	DB	A6	4E	F7	9B	DC	06-1E	00	9B	D9	96	E6	F6	9B	...	N	.....
001CD0	DC	16	06	00	9B	DD	DB	9B-DF	E0	9E	9B	DD	C1	9B	DD	.....		
001CE0	C0	74	13	9B	D9	B6	E6	F6-9B	DC	16	1E	00	9B	DD	D8	.t	.....	
001CF0	9B	DF	E0	9E	75	14	9B	DF-06	0A	00	C5	9C	69	01	C7	....u	.....i	
001D00	B2	9F	C7	AF	56	05	C7	A9-56	05	C7	A6	56	05	C7	A4	....V	...V	...V
001D10	9C	C7	A1	56	05	C7	9C	56-05	C7	97	56	05	C7	94	56	....V	...V	...V
001D20	05	C7	90	56	05	C7	8D	56-05	C7	8B	9C	C7	88	56	05	....V	...V	...V
001D30	C7	B3	56	05	C7	81	9C	C7-7E	56	05	C7	79	56	05	C7	..V	....~V	..yV
001D40	75	56	05	CF	6E	56	51	C7-68	56	05	CF	61	56	51	C7	uV	..nVQ	..nV
001D50	5B	56	05	CF	54	56	51	C7-4E	56	05	CF	47	56	51	C7	IV	..TVQ	..NV
001D60	41	56	05	C7	3C	56	05	C7-39	56	05	C7	37	9C	C7	34	AV	..~V	..9V
001D70	56	05	C7	2F	56	05	C7	23-56	06	C7	1E	56	05	C7	1B	V	..7V	..#V
001D80	56	05	C7	19	9C	C7	16	56-05	C7	11	56	05	C7	03	56	V	.....V	...V
001D90	06	C6	FE	56	05	C6	FB	56-05	C6	F9	9F	C6	F6	56	05	...V	...V	...V
001DA0	C6	F1	56	05	C6	EE	56	05-C6	EC	9C	C6	E7	56	05	C6	..V	...V	...V
001DB0	E4	56	05	C6	D8	56	06	C6-D3	56	05	C6	D0	56	05	C6	..V	...V	...V
001DC0	CE	9C	C6	CB	56	05	C6	C6-56	05	C6	B8	56	06	C6	B3	....V	...V	...V
001DD0	56	05	C6	B0	56	05	C6	AE-9F	C6	AF	56	05	CE	A4	56	V	..~V	..~V
001DE0	26	CE	7D	56	55	CE	3D	56-3E	CE	31	56	24	CE	1F	56	%.3VU	..=V	..1V
001DF0	3E	CE	05	56	21	85	EF	56-2F	85	D3	56	2F	C5	C0	9F	>..V!	..V	..V
001E00	C5	AE	9F	C5	A3	9F	CD	9D-56	21	85	77	56	2D	85	5B	.....V!	..wV	..I
001E10	56	2D	C5	49	9F	CD	3F	56-55	CD	33	56	3E	CD	27	56	V-	..I	..?VU
001E20	1D	CD	1D	56	3E	C5	07	9F-C4	FA	9F	C4	EE	9F	CC	E6	...V>	.....	
001E30	56	1A	C4	E3	9D	CC	DA	56-3E	CC	CD	56	1A	C4	CA	9D	V	.....V>	..V
001E40	CC	AF	56	19	CC	97	56	3E-CC	53	56	16	CC	3C	56	3E	..V	...V>	..SV
001E50	C4	13	56	06	C4	0F	56	05-C4	0A	56	05	C4	08	9C	C4	..V	...V	...V
001E60	05	56	05	C4	00	56	05	49-A0	17	03	01	D5	08	9B	DC	..V	...V	..I
001E70	36	16	00	9A	00	00	00	00-89	46	B8	EB	48	9B	D9	86	6	.....F	..H
001E80	E6	F6	9B	DC	16	26	00	9B-DD	D8	9B	DF	E0	9E	76	13	.....&	.....V	
001E90	9B	D9	86	E6	F6	9B	DC	16-26	00	9B	DD	D8	9B	DF	E0	.....&	.....	
001EA0	9E	76	22	9B	D9	86	E6	F6-9B	DE	0E	0A	00	9B	DF	06	..v"	.....	
001EB0	0A	00	9B	DC	36	16	00	9B-DE	C1	9A	00	00	00	00	89	....6	.....	
001EC0	46	B8	FF	46	D2	9B	DF	46-CA	9B	D8	A6	F4	F6	9B	DC	F	..F	..F
001ED0	06	1E	00	9B	D9	76	E6	F6-9B	DC	16	06	00	9B	DD	D8	.....		
001EE0	9B	DF	E0	9E	74	16	9B	D9-86	E6	F6	9B	DC	16	1E	00	....t	.....	
001EF0	9B	DD	D8	9B	DF	E0	9E	74-03	FF	4E	CA	9B	DF	46	CC	.....t	..N	..F
001F00	9B	DB	A6	F8	F6	9B	DC	06-1E	00	9B	D9	76	CE	F6	9B	.....		
001F10	DC	16	06	00	9B	DD	DB	9B-DF	E0	9E	74	13	9B	D9	86	.....t	.....	
001F20	CE	F6	9B	DC	16	1E	00	9B-DD	D8	9B	DF	E0	9E	75	15	.....u	.....	
001F30	9B	DF	06	0C	00	9B	DC	36-16	00	9A	00	00	00	00	89	.....6	.....	
001F40	86	A4	F4	EB	49	9B	D9	86-CE	F6	9B	DC	16	26	00	9B	....I	.....&	
001F50	DD	D8	9B	DF	E0	9E	76	13-9B	D9	86	CE	F6	9B	DC	16	.....V	.....	
001F60	26	00	9B	DD	D8	9B	DF	E0-9E	76	23	9B	D9	86	CE	F6	&	.....v#	.....
001F70	9B	DE	0E	0C	00	9B	DF	06-0C	00	9B	DC	36	16	00	9B	.....6	.....	
001F80	DE	C1	9A	00	00	00	00	89-86	A4	F4	FF	46	CC	9B	DF	.....F	.....	
001F90	46	B6	9B	DB	A6	E2	F6	9B-DC	06	1E	00	9B	D9	76	CE	F	.....	

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001FA0	F6 9B DC 16 06 00 9B DD-D8 9B DF E0 9E 74 16 9B	.....t..
001FB0	D9 86 CE F6 9B DC 16 1E-00 9B DD D8 9B DF E0 9E	.....
001FC0	74 03 FF 4E B6 FF B6 D2-F6 FF B6 DE F6 FF B6 DC	t..N.....
001FD0	F6 FF B6 EA F6 0E E8 00-00 83 C4 08 FF B6 54 F7	.....T.
001FE0	FF B6 C2 F6 FF 76 A4 0E-E8 00 00 83 C4 06 E9 68	.....v.....h
001FF0	0D 8D 86 C0 F6 16 50 8D-46 CE 16 50 8D 46 F2 16	.....P.F..F.F..
002000	50 9A 00 00 00 00 83 C4-0C 89 46 F0 FF B6 C0 F6	P.....F.....
002010	9A 00 00 00 00 83 C4 02-83 7E A4 00 74 23 83 7E	.....t#..
002020	F0 00 7E 1D 83 7E C2 01-75 17 FF B6 D2 F6 FF B6	.....u.....
002030	DE F6 FF B6 DC F6 FF B6-EA F6 0E E8 00 00 83 C4	.....t.
002040	08 83 7E F0 00 7F 03 E9-0F 0D 83 7E F0 01 74 03	.....ub.....
002050	E9 91 03 83 7E A4 00 75-62 C7 86 C2 F6 00 00 8E	F.....F.....
002060	46 F2 01 86 DA F6 8B 46-CE 01 86 CC F6 83 BE DA	.....
002070	F6 00 7D 06 C7 86 DA F6-00 00 81 BE DA F6 FE 00	.....
002080	7E 06 C7 86 DA F6 FE 00-83 BE CC F6 00 7D 06 C7	.....
002090	86 CC F6 00 00 81 BE CC-F6 EE 00 7E 06 C7 86 CC	.....T..
0020A0	F6 EE 00 FF B6 CC F6 FF-B6 DA F6 FF B6 54 F7 FF	v..j.....t
0020B0	76 BA 6A 01 0E E8 00 00-83 C4 0A 83 7E A4 01 74	.....F.....
0020C0	03 E9 20 03 8B 46 F2 F7-AE BC F6 01 B6 EA F6 8B	F.....
0020D0	46 CC F7 AE BC F6 01 86-DC F6 83 BE EA F6 01 7D	.....
0020E0	0A C7 86 EA F6 01 00 FF-86 A2 F2 81 BE EA F6 FE	.....
0020F0	00 7E 0A C7 86 EA F6 FE-00 FF 86 A2 F2 83 BE DC	.....
002100	F6 00 7D 06 C7 86 DC F6-00 00 81 BE DC F6 EE 00	.....
002110	7E 06 C7 86 DC F6 EE 00-8E 86 EA F6 05 FE 00 89	.....
002120	86 DE F6 8E 86 DC F6 05-EE 00 89 86 D2 F6 8B 86	.....@.....
002130	EA F6 D1 F8 40 89 86 D4-F6 8B 86 DC F6 D1 F8 05	.....
002140	F1 00 89 86 BE F6 FF B6-A0 F2 9A 00 00 00 00 83	.....
002150	C4 02 8B 86 D4 F6 03 B6-E0 F6 8B BE BE F6 03 BE	.....
002160	D8 F6 57 56 FF B6 BE F6-FF B6 D4 F6 FF 76 BA 6A	..WV.....v..j
002170	01 9A 00 00 00 00 83 C4-0C 9B DF 06 0A 00 9B D9	.....
002180	C0 9C 9C 76 01 C7 10 56-05 C7 0E 9F C7 0B 56 05	...v...v...v.
002190	CF 04 56 26 CE DD 56 55-86 48 56 54 85 CE 56 44	..V&..VU..HVT..VD
0021A0	CD A3 56 31 CD 94 56 46-85 7B 56 4A 85 69 56 44	..V1..VF..VJ..iVD
0021B0	C5 4E 56 05 C5 4B 56 05-C5 49 9C C5 46 56 05 C5	..NV..KV..I..FV..
0021C0	41 56 05 C5 3B 56 05 C5-38 56 05 C5 36 9C C5 33	AV...V..BV..6..3
0021D0	56 05 C5 2E 56 05 C5 2C-9C C5 29 56 05 C5 24 56	V...V...V..\$V
0021E0	05 C5 20 56 05 CD 15 56-51 C5 11 56 05 C5 0F 9C	..V...VQ..V....
0021F0	C5 0C 56 05 C5 0A 9F C5-07 56 05 C5 05 9F C5 02	..V...V.....
002200	56 05 C4 FD 56 05 C4 F7-56 05 C4 F4 56 05 C4 F2	V...V...V...V...
002210	9C C4 EF 56 05 C4 EA 56-05 C4 E4 56 05 C4 E1 56	...V...V...V...V
002220	05 C4 DF 9C C4 DC 56 05-C4 D7 56 05 CC CD 56 51	.....V...V...VQ
002230	C4 CA 9C C4 C7 56 05 C4-C5 9F C4 C2 56 05 C4 BC	.....V.....V...
002240	56 05 C4 B9 56 05 C4 B7-9C C4 B4 56 05 C4 AF 56	V...V...V...V..V
002250	05 C4 A9 56 05 C4 A6 56-05 C4 A4 9C C4 A1 56 05	...V...V...V...
002260	C4 9C 56 05 C4 9A 9C C4-97 56 05 C4 92 56 05 C4	..V.....V...V..
002270	8E 56 05 C4 85 56 05 C4-82 56 05 C4 80 9C C4 7D	.V...V...V.....3

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002280	56	05	C4	78	56	05	C4	72-56	05	C4	6F	56	05	C4	6D	V...xV...rV...oV...m
002290	9C	C4	6A	56	05	C4	65	56-05	C4	63	9C	C4	60	56	05	..jV...eV...c...V.
0022A0	C4	5B	56	05	C4	57	56	05-CC	4D	56	51	C4	49	56	05	.IV...wV...MVQ.IV.
0022B0	C4	47	9C	C4	44	56	05	C4-42	9F	C4	3F	56	05	C4	3D	.G...DV...B...?V...=
0022C0	9F	C4	3A	56	05	C4	35	56-05	C4	2F	56	05	C4	2C	56	...:V...5V.../V...V
0022D0	05	C4	2A	9C	C4	27	56	05-C4	22	56	05	C4	1C	56	05	...*...V..."V...V.
0022E0	C4	19	56	05	C4	17	9C	C4-14	56	05	C4	0F	56	05	CC	..V.....V...V..
0022F0	06	56	51	C4	03	9C	C4	00-56	05	3E	A0	AE	01	01	EB	.VQ.....V.;.....
002300	0B	9B	DB	BE	84	F2	90	9B-8B	86	D4	F6	2B	8a	B8	F6	.....+.....
002310	89	86	9B	F2	9B	DF	86	9B-F2	9B	DC	0E	1a	00	9B	D8	.....N.....+.....
002320	F1	9B	D9	9E	4E	F7	90	9B-8B	C6	2B	86	B8	F6	89	8a	.....N.....+.....
002330	9B	F2	9B	DF	86	9B	F2	9B-DC	0E	1a	00	9B	D8	F1	9B	.....N.....+.....
002340	D9	9E	F4	F6	9B	DF	06	0C-00	9B	D9	C0	9B	DB	BE	8E	.....+.....
002350	F2	90	9B	8B	86	BE	F6	2B-86	AC	F6	89	86	9B	F2	9B	.....+.....
002360	DF	86	9B	F2	9B	DC	0E	1a-00	9B	D8	F1	9B	D9	9E	F8	.....+.....
002370	F6	90	9B	8B	C7	2B	86	AC-F6	89	86	9B	F2	9B	DF	86	.....+.....
002380	9B	F2	9B	DC	0E	1a	00	9B-D8	F1	9B	D9	9E	E2	F6	9B	..N.....F.....
002390	D9	86	4E	F7	9A	00	00	00-00	89	46	D2	9B	D9	86	F4	.....F.....
0023A0	F6	9A	00	C0	00	00	89	46-CA	9B	D9	86	F6	9A	00	00	....F.....
0023B0	00	00	00	89	46	CC	9B	D9-86	E2	F6	9A	00	00	00	00	..F...F...N.....
0023C0	89	46	86	9B	DF	46	D2	9B-D8	A6	4E	F7	9B	DC	06	1E	..F...F...N.....
0023D0	00	9B	D9	96	E6	F6	9B	DC-16	06	00	9B	DD	D8	9B	DF	.....t.....
0023E0	E0	9E	9B	DD	C1	9B	DD	C0-74	13	9B	D9	86	Ea	F6	9B	.....t.....
0023F0	DC	16	1E	00	9B	DD	D8	9B-DF	E0	9E	7B	14	9B	DF	06	.....u.....
002400	0A	00	9B	DC	36	16	00	9A-00	00	00	00	89	46	B8	EB	.....e.....F..
002410	4E	9B	D9	86	E6	F6	9B	DC-16	2a	00	9B	DD	D8	9B	DF	H.....&.....
002420	E0	9E	76	13	9B	D9	86	E6-F6	9B	DC	1a	2a	00	9B	DD	..V.....&.....
002430	D8	9B	DF	E0	9E	76	22	9B-D9	86	E6	F6	9B	DE	0E	0A	.....v".....
002440	00	9B	DF	06	0A	00	9B	DC-36	16	00	9B	DE	C1	9A	00	.....6.....
002450	00	00	00	89	46	B8	FF	46-D2	9B	DF	4a	CA	9B	D8	A6	....F...F...F....
002460	F4	F6	9B	DC	06	1E	00	9B-D9	96	E6	F6	9B	DC	16	06	.....t.....
002470	00	9B	DD	D8	9B	DF	E0	9E-74	16	9B	D9	86	E6	F6	9B	.....t.....
002480	DC	16	1E	00	9B	DD	D8	9B-DF	E0	9E	74	03	FF	4E	CA	.....t...N..
002490	9B	DF	46	CC	9B	D8	A6	F8-F6	9B	DC	06	1E	00	9B	D9	..F.....
0024A0	96	CE	F6	9B	DC	16	06	00-9B	DD	D8	1F	9C	79	01	C5	.....y...
0024B0	A7	56	05	C5	A5	9C	C5	A2-56	05	C5	9D	56	05	C5	9B	.V.....V...V...V
0024C0	9C	C5	98	56	05	C5	93	56-05	C5	8F	56	05	C5	86	56	...V...V...V...V
0024D0	05	C5	83	56	05	C5	81	9C-C5	7E	56	05	C5	79	56	05	...V...~V...yV.
0024E0	C5	73	56	05	C5	70	56	05-C5	6E	9C	C5	6B	56	05	C5	..sV...pV...n...kV..
0024F0	66	56	05	C5	64	9C	C5	61-56	05	C5	5C	56	05	C5	58	fV...d...aV...V...X
002500	56	05	CD	4E	56	51	C5	4A-56	05	C5	48	9C	C5	45	56	V...NVQ.JV...H...EV
002510	05	C5	43	9F	C5	40	56	05-C5	3E	9F	C5	3B	56	05	C5	..C...@V...>...;V..
002520	36	56	05	C5	30	56	05	C5-2D	56	05	C5	2B	9C	C5	28	aV...OV...-V...+...C
002530	56	05	C5	23	56	05	C5	1D-56	05	C5	1A	56	05	C5	18	V...#V...V...V...V...
002540	9C	C5	15	56	05	C5	10	56-05	CD	07	56	51	C5	04	9C	...V...V...VQ...
002550	C5	01	56	05	C4	FF	9F	C4-FC	56	05	C4	F6	56	05	C4	..V.....V...V..

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002560	F3 56 05 C4 F1 9C C4 EE-56 05 C4 E9 56 05 C4 E4	.V.....V...V...
002570	56 05 C4 E1 56 05 C4 DD-56 05 C4 DA 56 05 C4 D8	V...V...V...V...
002580	9C C4 D5 56 05 C4 D0 56-05 C4 CE 9C C4 CB 56 05	...V...V...V...
002590	C4 C6 56 05 C4 C2 56 05-CC BB 56 51 C4 B5 56 05	..V...V...VQ..V.
0025A0	CC AE 56 51 C4 A8 56 05-CC A1 56 51 C4 9B 56 05	..VQ..V...VQ..V.
0025B0	CC 94 56 51 C4 8E 56 05-C4 89 56 05 C4 86 56 05	..VQ..V...V...V.
0025C0	C4 84 9C C4 81 56 05 C4-7C 56 05 C4 70 56 06 C4	.....V...IV...aV..
0025D0	6B 56 05 C4 68 56 05 C4-66 9C C4 63 56 05 C4 5E	KV...hV...f...cV...^
0025E0	56 05 C4 50 56 06 C4 4B-56 05 C4 48 56 05 C4 46	V...PV...KV...HV...F
0025F0	9F C4 43 56 05 C4 3E 56-05 C4 3B 56 05 C4 39 9C	..CV...>V...;V...9.
002600	C4 36 56 05 C4 31 56 05-C4 25 56 06 C4 20 56 05	.6V...IV...2V... V.
002610	C4 1D 56 05 C4 1B 9C C4-1B 56 05 C4 13 56 05 C4	..V...V...V...V...
002620	05 56 06 C4 00 56 05 E9-A0 B4 03 01 92 0D 9B DF	.V...V.....
002630	E0 9E 74 13 9B D9 86 CE-F6 9B DC 16 1E 00 9B DD	..t.....
002640	D8 9B DF E0 9E 75 15 9B-DF 06 0C 00 9B DC 36 16	.....u.....6.
002650	00 9A 00 00 00 00 89 86-A4 F4 EB 49 9B D9 86 CE	.....l.....
002660	F6 9B DC 16 26 00 9B DD-D8 9B DF E0 9E 76 13 9B	.....&.....v...
002670	D9 86 CE F6 9B DC 16 26-00 9B DD D8 9B DF E0 9E	.....&.....
002680	76 23 9B D9 86 CE F6 9B-DE 0E 0C 00 9B DF 06 0C	v#.....
002690	00 9B DC 36 16 00 9B DE-C1 9A 00 00 00 00 89 86	...6.....
0026A0	A4 F4 FF 46 CC 9B DF 46-B6 9B D8 A6 E2 F6 9B DC	...F...F.....
0026B0	06 1E 00 9B D9 96 CE F6-9B DC 16 06 00 9B DD D8	.....
0026C0	9B DF E0 9E 74 16 9B D9-B6 CE F6 9B DC 16 1E 00	....t.....
0026D0	9B DD D8 9B DF E0 9E 74-03 FF 4E B6 C7 46 C2 01	.....t...N..F..
0026E0	00 C7 86 EE F6 00 00 83-7E F0 03 75 6B 8B 86 C0	.....uk...
0026F0	F6 3D 04 00 73 62 83 7E-A4 00 75 51 C7 86 C2 F6	..=.ub...uG....
002700	01 00 8B 46 CE 29 86 54-F7 83 BE 54 F7 02 7D 06	...F...T...T...3.
002710	C7 86 54 F7 02 00 83 BE-54 F7 1E 7E 06 C7 86 54	..T.....T...T...
002720	F7 1E 00 FF B6 CC F6 FF-B6 DA F6 FF B6 54 F7 FF	.....T...
002730	76 BA 6A 01 0E EB 00 00-83 C4 0A FF B6 54 F7 FF	v..j.....T...
002740	B6 C2 F6 FF 76 A4 0E EB-00 00 83 C4 06 83 7E A4	....v.....~.
002750	01 75 05 C7 46 A4 01 00-83 7E F0 02 74 03 E9 FB	..u..F....~..t...
002760	08 8B 86 C0 F6 3D 01 00-74 1C 3D 02 00 75 03 E9	.....=.t...=..u..
002770	76 04 3D 05 00 75 03 E9-86 07 3D 07 00 75 03 E9	v...=..u....=..u..
002780	D4 08 E9 D7 08 90 FF 46-A4 83 7E A4 01 7F 03 E9	.....F...~.....
002790	74 01 C7 46 A4 00 00 C7-86 C2 F6 00 00 FF B6 54	t...F.....T
0027A0	F7 6A 00 6A 00 0E EB 00-00 83 C4 06 1E 68 E3 01	.j..j.....h..
0027B0	6A 00 9A 00 00 00 83-C4 06 6A 01 0E EB 00 00	j.....j.....
0027C0	83 C4 02 6A 00 6A 02 9A-00 00 00 00 83 C4 04 6A	...j..j.....j
0027D0	01 6A 00 9A 00 00 00 00-83 C4 04 6A 00 9A 00 00	.j.....j.....
0027E0	00 00 83 C4 02 6A 00 FF-76 BA 9A 00 00 00 00 83	.....j..v.....
0027F0	C4 04 6A 08 68 80 00 6A-00 FF 76 BA FF 76 C0 9A	..j..h...j..v..v..
002800	00 00 00 00 83 C4 0A 6A-01 FF 76 BA FF 76 BE FF	.....j..v..v..
002810	76 BA 9A 00 00 00 00 83-C4 0B 6A 00 9A 00 00 00	v.....j.....
002820	00 83 C4 02 6A 05 6A 01-FF B6 B0 F6 FF B6 C4 F6	....j..j.....
002830	FF 76 BA FF B6 D2 F6 FF-B6 DE F6 FF B6 DC F6 FF	.v.....

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002840	B6	EA	F6	FF	76	BA	9A	00-00	00	00	B3	C4	14	6A	00	.....v.....j.	
002850	6A	02	9A	00	00	00	00	B3-C4	04	6A	01	6A	01	9A	00	j.....j.j...	
002860	00	00	00	B3	C4	04	FF	B6-D2	F6	FF	B6	DE	F6	FF	B6	.....	
002870	DC	F6	FF	B6	EA	F6	0E	E8-00	00	B3	C4	0B	0E	E8	00	..v.j.....v	
002880	00	FF	76	BA	6A	00	9A	00-00	00	00	B3	C4	04	FF	76	.....v.j...	
002890	BA	9A	00	00	00	00	83	C4-02	FF	76	BA	6A	01	9A	00	.....	
0028A0	00	00	00	83	C4	04	FF	B6-A0	F2	9A	00	00	00	00	83	.....	
0028B0	C4	02	6A	00	9A	00	00	00-00	B3	C4	02	FF	B6	A0	F2	..j.....	
0028C0	9A	00	00	00	00	83	C4	02-FF	B6	CC	F6	FF	36	DA	F6	.....	
0028D0	FF	B6	54	F7	FF	76	BA	6A-00	0E	E8	00	00	83	C4	0A	..T..v.j.....	
0028E0	0E	E8	00	00	FF	76	BA	FF-76	CC	FF	76	CA	FF	76	D2	.....v.v.v.v.v.	
0028F0	FF	B6	A4	F4	FF	76	BA	FF-36	CC	00	FF	36	CA	00	0E	.....v.v.v.v.v.	
002900	E8	00	00	83	C4	10	83	7E-A4	01	74	03	E8	40	07	6A	.....v.v.v.v.v.	
002910	00	6A	01	9A	00	00	00	00-83	C4	04	6A	00	9A	00	00	..j.....j.....	
002920	00	00	83	C4	02	FF	B6	54-F7	FF	B6	C2	F6	FF	76	A4	.....T.....v.	
002930	0E	E8	00	00	83	C4	0E	1E-68	0B	02	6A	00	9A	00	00	.....h.j.....	
002940	00	00	83	C4	06	6A	00	0E-E8	00	00	E3	C4	02	83	BE	.....j.....	
002950	BA	F6	00	7E	03	E9	D2	00-80	3E	04	00	00	74	18	9A	.....u.....t...	
002960	00	00	00	00	0B	C0	7E	0F-6A	49	6A	43	1E	58	29	02	.....u.jijc.b).	
002970	0E	E8	00	00	83	C4	0B	80-3E	04	00	00	00	7E	03	E9	9D	.....j.....u...
002980	00	6A	01	1E	68	64	02	9A-00	00	00	00	83	C4	06	89	..j..hd.....	
002990	46	A2	40	7E	11	1E	68	68-02	6A	01	9A	00	00	00	00	F..eu...hh.j.....	
0029A0	83	C4	06	E3	6E	90	C7	86-A6	F4	00	00	B8	20	20	B9	.....n.....	
0029B0	01	00	8D	BE	FC	F6	16	07-F2	AB	AA	B3	86	A6	F4	03	.....	
0029C0	8D	86	FC	F6	8B	D8	8B	FB-8C	D0	B9	FF	FF	33	C0	F2	.....S...	
0029D0	AE	F7	E1	49	51	8D	86	FC-F6	16	50	FF	76	42	AB	9C	...IG.....F.v...	
0029E0	4D	01	CF	6E	56	25	C7	69-9D	CF	3A	56	3C	C7	57	9D	M..avZ..i...ZVO.W.	
0029F0	C7	4B	9D	87	44	56	4F	C7-40	9D	CF	32	56	42	C7	2C	..K...LVO..@...ZVB..	
002A00	9D	87	1B	56	45	CF	10	56-25	C7	0B	9D	87	04	56	4A	...VE...VZ....VJ	
002A10	CE	F0	56	1D	CE	E6	56	3E-86	D3	56	3A	C6	CF	9F	C6	..V...V>..V:....	
002A20	CB	9F	86	B4	56	35	86	AD-56	54	CE	93	56	55	CE	87	....VS...VT...VU..	
002A30	56	34	CE	7D	56	32	CE	71-56	3E	CE	64	56	2E	CE	59	V4.3V2.qV>.dV..Y	
002A40	56	3E	86	51	56	2C	86	4A-56	44	CE	31	56	41	CE	25	V>.qV...JVD.1VA.%	
002A50	56	3E	CE	19	56	2B	CD	EF-56	53	CD	E5	56	27	CD	D2	V>..V+..VS..V'...	
002A60	56	56	CD	BD	56	58	CD	B0-56	53	CD	A6	56	41	CD	9A	VV...VX...VS..VA..	
002A70	56	3E	85	90	56	45	CD	85-56	25	CD	80	9D	85	79	56	V>..VE..VZ....yV	
002A80	4A	85	1A	56	4A	85	0B	56-54	C4	A5	56	05	C4	A2	56	J..VJ..VT..V...V	
002A90	05	C4	A0	9C	C4	9D	56	05-C4	98	56	05	C4	92	56	05	.....V...V...V...	
002AA0	C4	8F	56	05	C4	8D	9C	C4-8A	56	05	C4	85	56	05	C4	...V...V...V...	
002AB0	83	9C	C4	80	56	05	C4	7B-56	05	C4	77	56	05	CC	6C	....V...{V..wV..1	
002AC0	56	51	C4	68	56	05	C4	66-9C	C4	63	56	05	C4	61	9F	VQ.hV..f..cV..a.	
002AD0	C4	5E	56	05	C4	5C	9F	C4-59	56	05	C4	54	56	05	C4	..V...V...YV..TV..	
002AE0	4E	56	05	C4	4B	56	05	C4-49	9C	C4	46	56	05	C4	41	NV..KV..I..FV..A	
002AF0	56	05	C4	3B	56	05	C4	38-56	05	C4	36	9C	C4	33	56	V...V..8V..6...3V	
002B00	05	C4	2E	56	05	CC	24	56-51	C4	21	9C	C4	1E	56	05	...V...\$VQ...!...V.	
002B10	C4	1C	9F	C4	19	56	05	C4-13	56	05	C4	10	56	05	C4	.....V...V...V...	

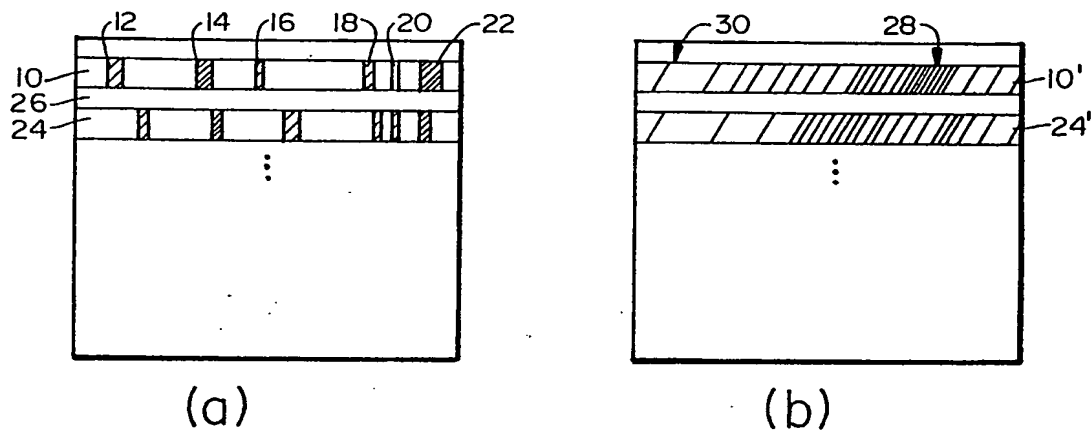


FIG. 1

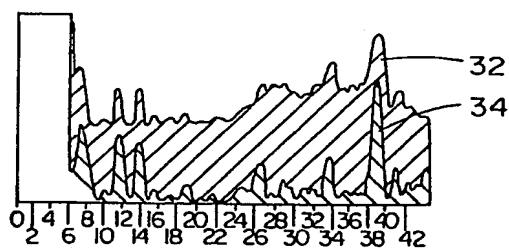
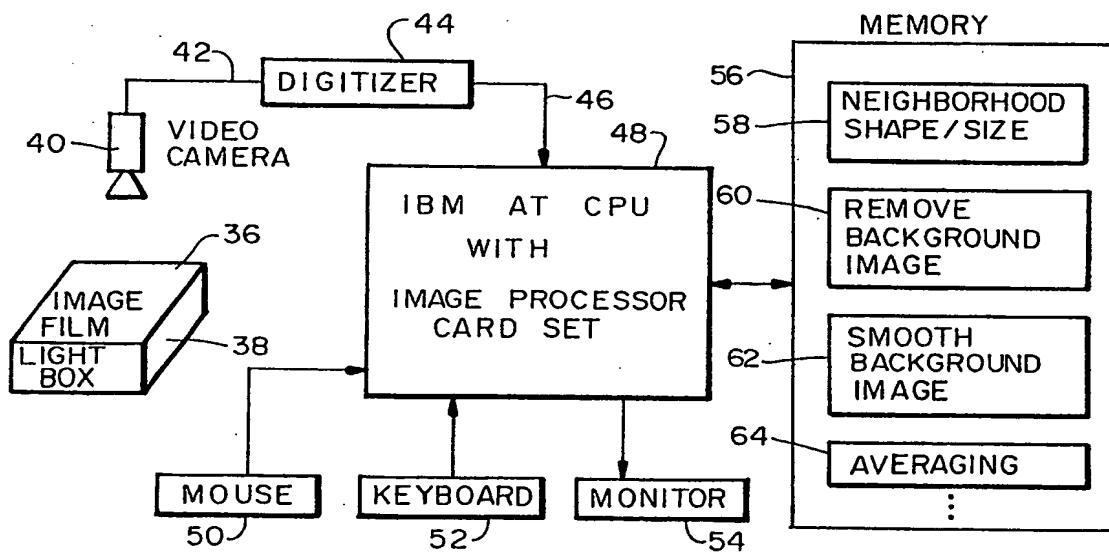


FIG. 2



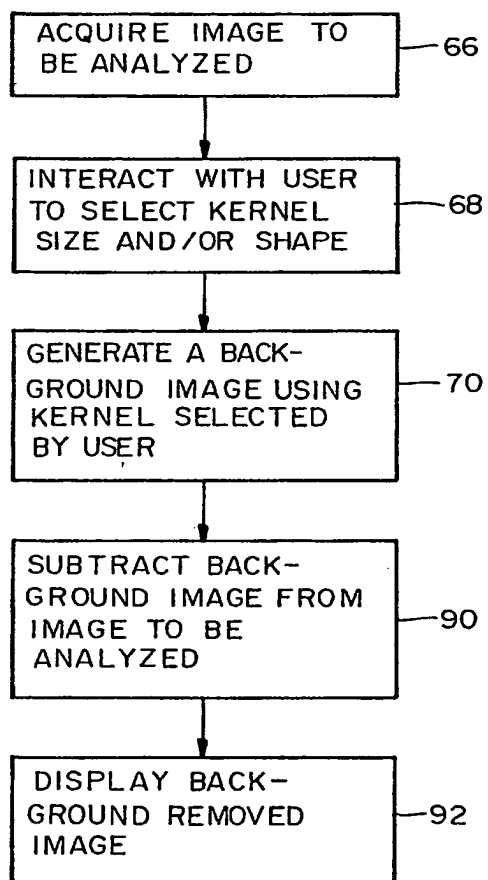


FIG. 4

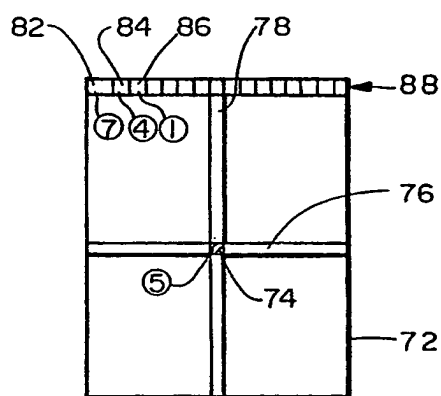


FIG. 5

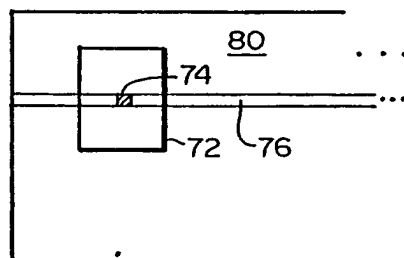


FIG. 6

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Nouvellement déposé

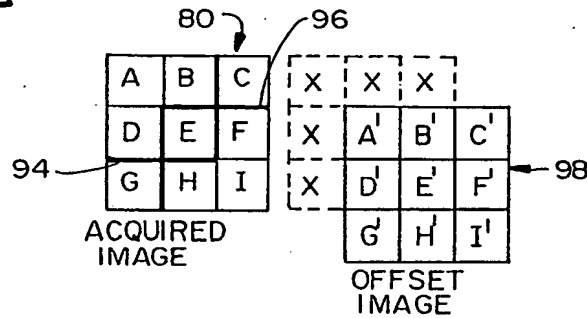
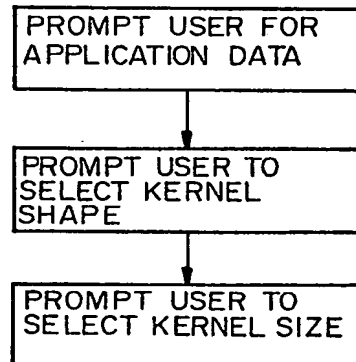
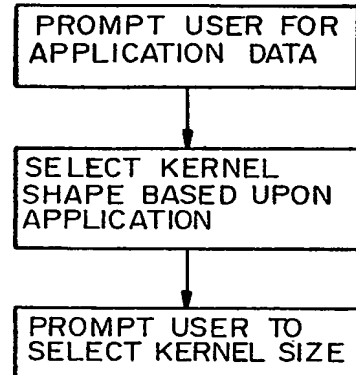
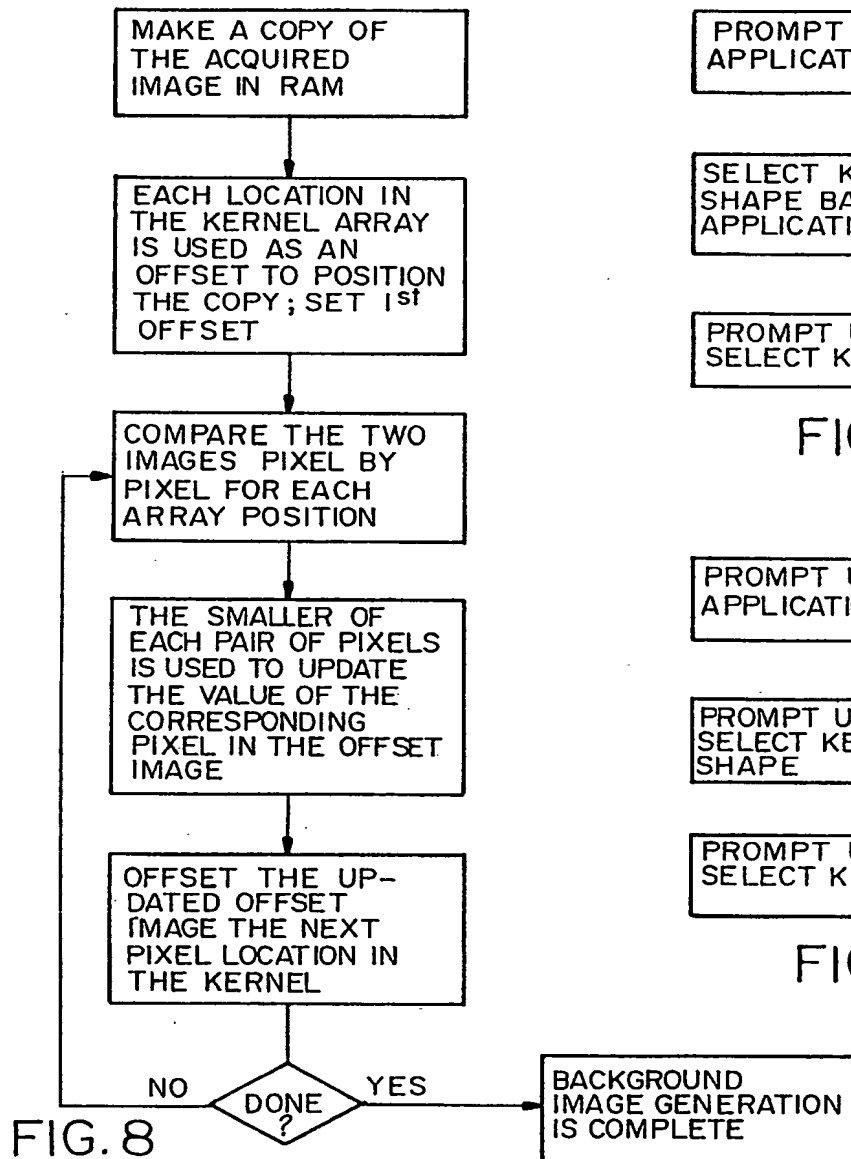


FIG. 7



Neu eingereicht / Newly  
Nouvellement dépos

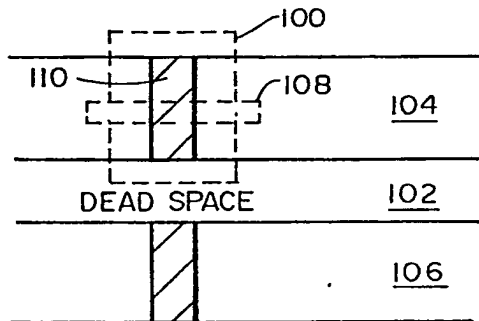


FIG. 11

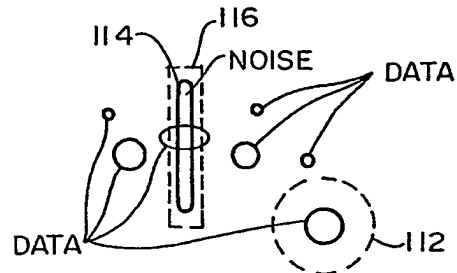


FIG. 12

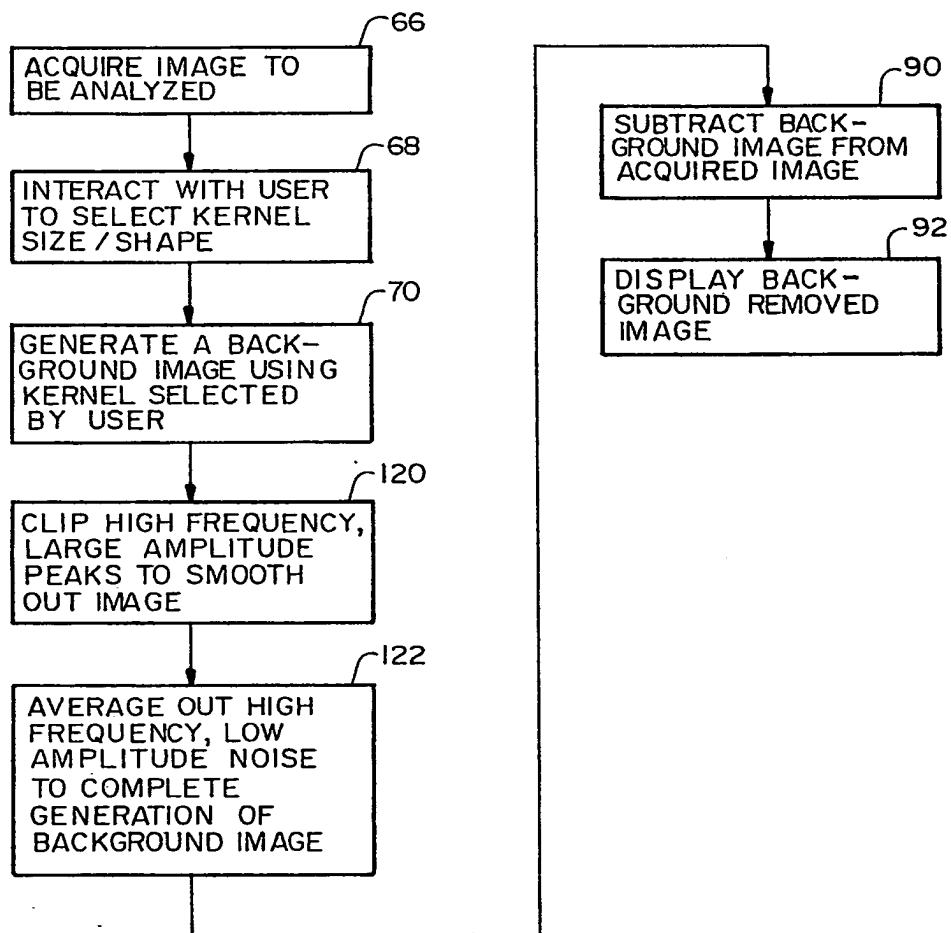
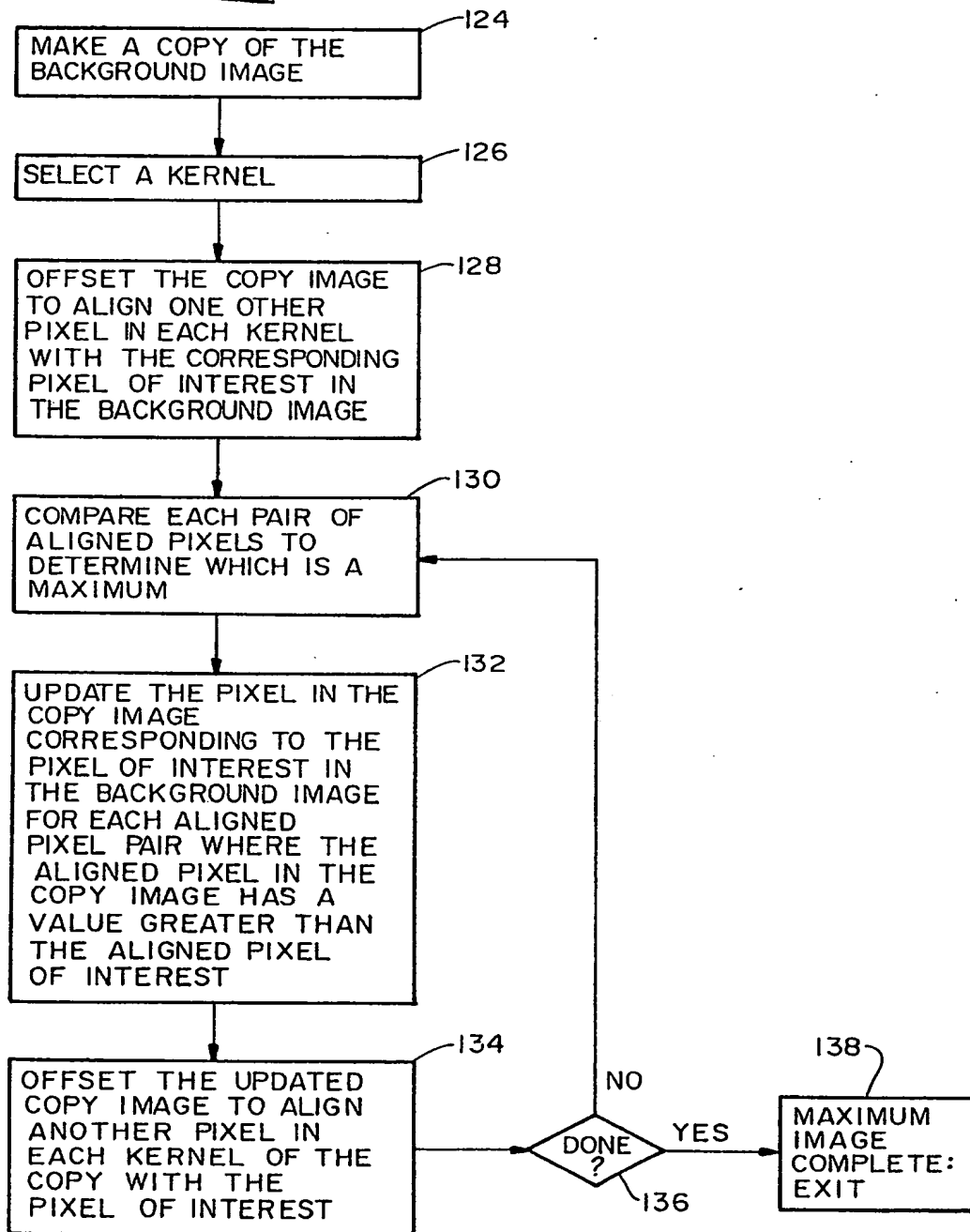


FIG. 13

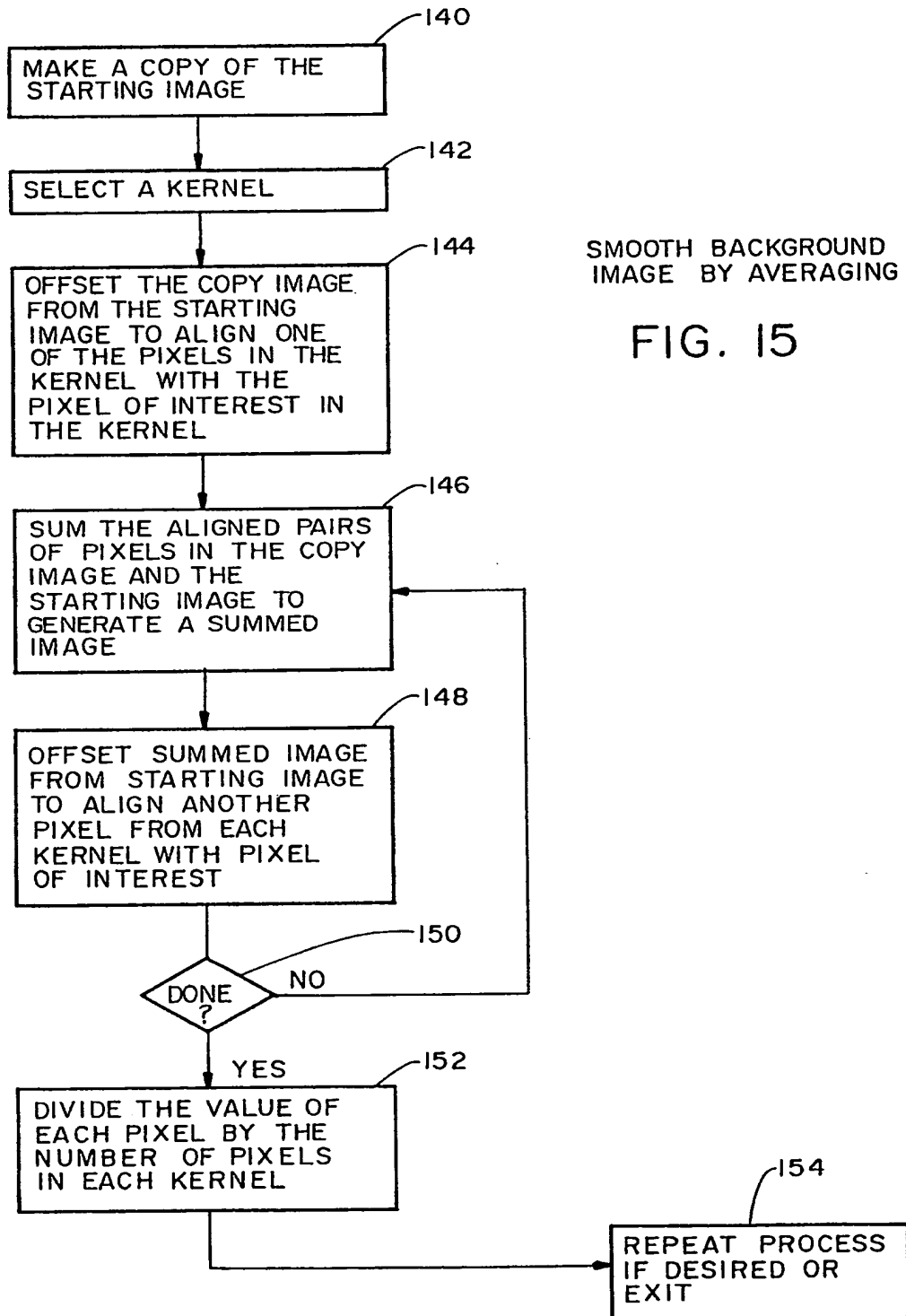
Neu eingereicht / Newly file  
Nouvellement déposé



GENERATE MAXIMUM IMAGE FROM  
BACKGROUND IMAGE

FIG. 14

Neu eingereicht / Newly file  
Nouvellement déposé



Neu eingereicht / Newly filed  
Nouvellement déposé

## PROCESS FOR GENERATING A PERCENT CHANGE IMAGE

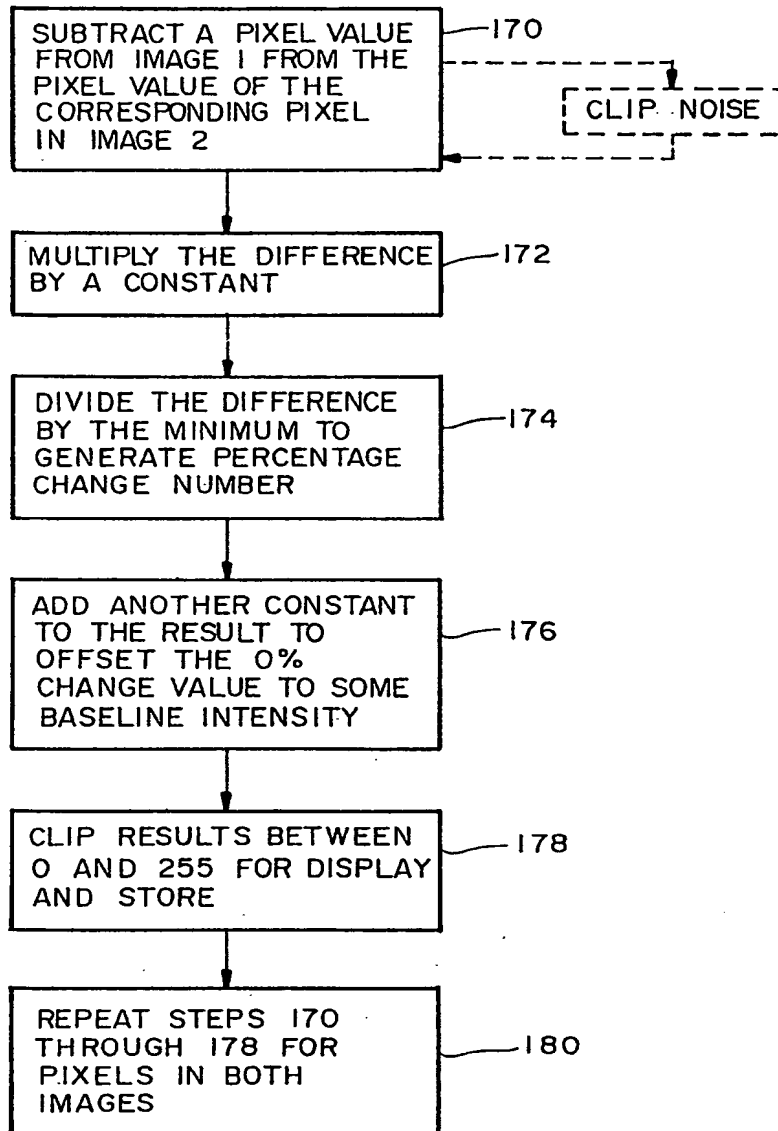
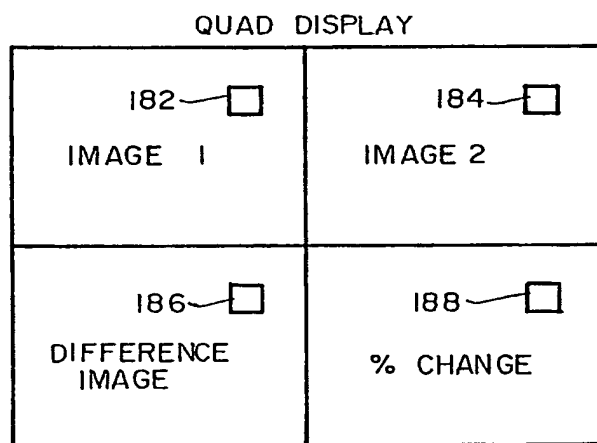
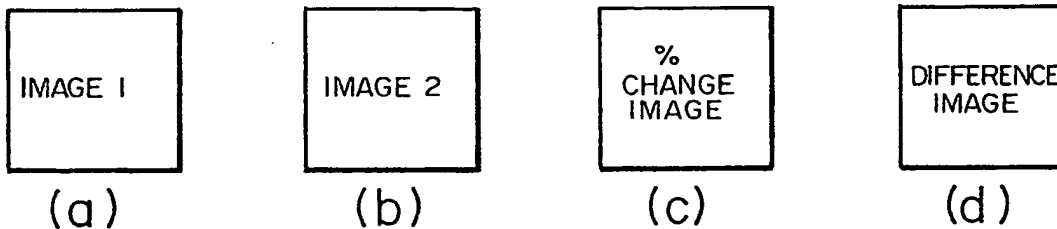


FIG. 16

Neu eingereicht / Newly filed  
Nouvellement déposé



(e)

FIG. 17

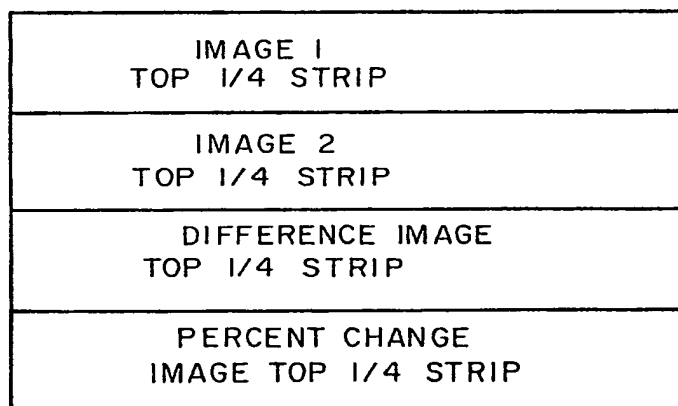


FIG. 18

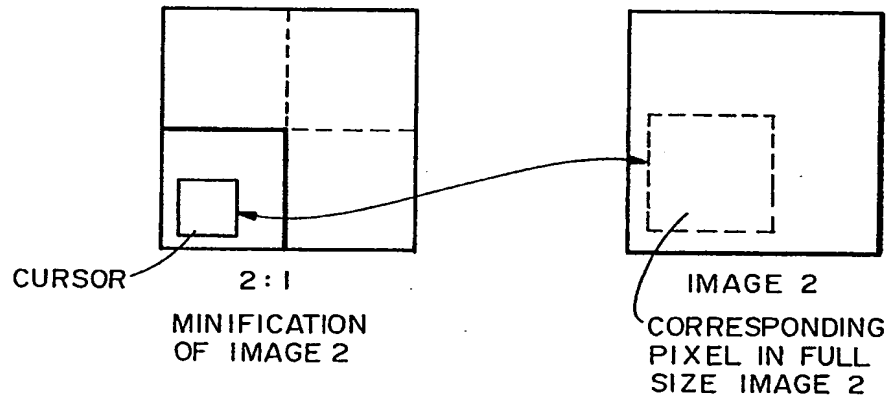


FIG. 19

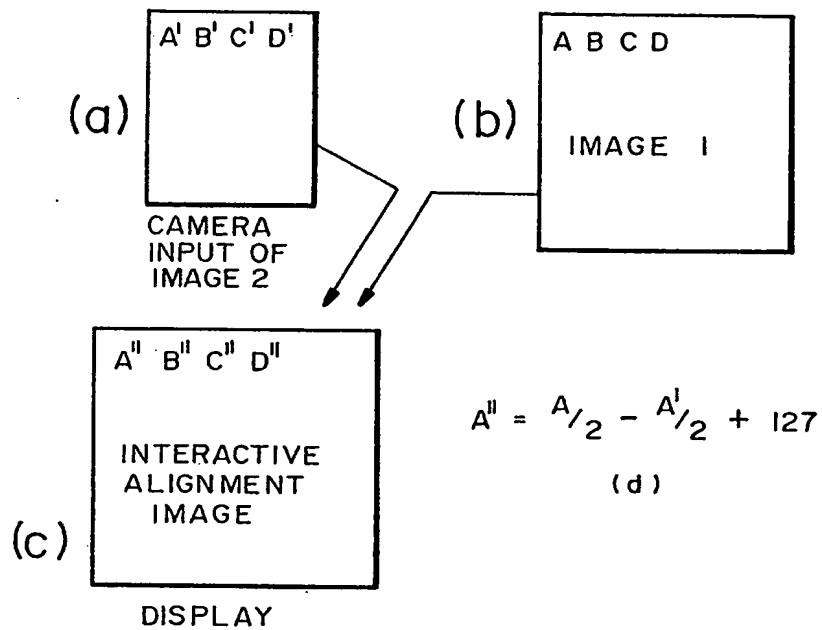


FIG. 20



(12)

# EUROPEAN PATENT APPLICATION

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(51) Int. Cl.<sup>5</sup>: **G06F 15/68, H04N 1/40**

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(84) Designated Contracting States:  
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**14.10.92 Bulletin 92/42**

(71) Applicant: **BIOLOGICAL VISIONS**  
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**San Jose, California(US)**

(74) Representative: **Kopacz, William James**  
**83, Avenue Foch**  
**F-75116 Paris(FR)**

(54) **Method and apparatus for removing noise data from a digitized image.**

(57) An apparatus and method for removing background noise and high frequency noise form an image by comparing each pixel in the image with neighboring pixels defining a variably shaped and

sized kernel. The size and shape of the kernel are optimized for the particular characteristics of the data to be analyzed.

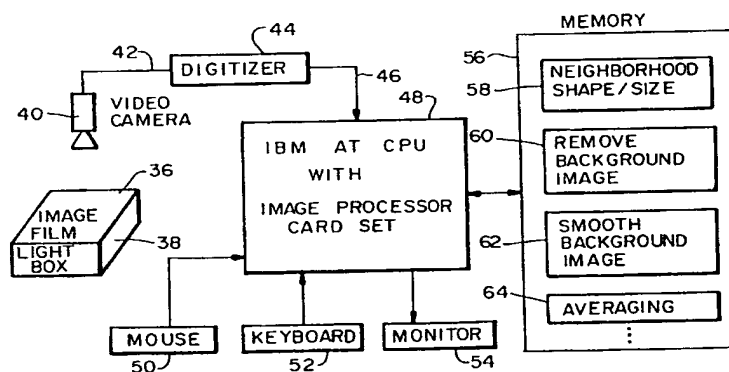


FIG. 3



European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number

EP 90 40 1304  
PAGE1

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	US-A-4 823 194 (TADAAKI MISHIMA ET AL)	1-3, 8, 31, 34-36	G06F15/68 H04N1/40
Y	* abstract *	4, 11, 14, 15	
A	* column 4, line 31 - line 38 * * column 13, line 67 - column 14, line 33; claims 1, 2, 6, 8, 9, 11 * ---	16, 17	
Y	SIGNAL PROCESSING, vol. 15, no. 3, October 1988, AMSTERDAM pages 249 - 258; P.W. VERBEEK ET AL: 'Low-level Image Processing by Max-Min Filters'	4, 11	
A	* page 249, left column, line 1 - page 250, left column, line 3 * * Section 4 * ---	1, 8, 16, 17, 31, 34	
Y	PROCEEDINGS OF THE EIGHTH ANNUAL CONFERENCE OF THE IEEE/ENGINEERING IN MEDICINE AND BIOLOGY SOCIETY vol. 2, November 1986, FORT-WORTH, TEXAS pages 1113 - 1117; R.M. RANGAYAN ET AL: 'Pixel-independent image processing techniques for enhancement of features in mammograms'	14, 15	
A	* page 1114, left column, paragraph 2 - right column, paragraph 1 * ---	1, 8, 16, 17, 31, 34	TECHNICAL FIELDS SEARCHED (Int. Cl.5)  G06F H04N G06K
D, A	PROCEEDINGS OF S.P.I.E. METHODS OF HANDLING AND PROCESSING IMAGERY vol. 757, 1987, pages 40 - 47; H.G. RUTHERFORD AT AL: 'Object Identification and Measurement from Images with Access to the Database to Select Specific Subpopulations of Special Interest' * abstract * * page 46, line 20 - line 23 * --- -/--	1, 8, 16, 17, 31, 34	
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 04 AUGUST 1992	Examiner NICHOLLS J.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : oral-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons A : member of the same patent family, corresponding document	

EP 90 40 1304

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European Patent  
Office

## EUROPEAN SEARCH REPORT

Application Number

EP 90 40 1304  
PAGE2

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	<p>COMPUTER, vol. 16, no. 1, January 1983, LONG BEACH US pages 22 - 34; S.R. STERNBERG: 'Biomedical Image Processing' * the whole document *</p> <p>-----</p>	1, 8, 16, 17, 31, 34	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 04 AUGUST 1992	Examiner NICHOLLS J.
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure F : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>..... A : member of the same patent family, corresponding document</p>			